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New York State Museum

JOHN M. CLARKE, Director

Museum Bulletin 179

REPORT OF THE STATE BOTANIST 1914

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ALBANY

THE UNIVERSITY OF THE STATE OF NEW YORK

1915

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THE UNIVERSITY OF THE STATE OF NEW YORK

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The University of the State of New York
Science Department, June 14, 1915

Dr John H. Finley
President of the University

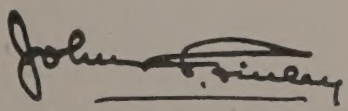
SIR:

I beg to transmit to you herewith the annual report of the State Botanist for the fiscal year 1914 and to recommend this for publication as a bulletin of the State Museum.

Very respectfully
JOHN M. CLARKE
Director

THE UNIVERSITY OF THE STATE OF NEW YORK
OFFICE OF THE PRESIDENT

Approved for publication this 17th day of June 1915



President of the University

University of the State of New York Bulletin

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No. 605 ALBANY, N. Y. DECEMBER 15, 1915

New York State Museum

JOHN M. CLARKE, Director

Museum Bulletin 179

REPORT OF THE STATE BOTANIST 1914

John M. Clarke
Director, Science Department

SIR:

I beg to communicate herewith my report on the work of the State Botanist for the fiscal year 1914.

Very respectfully
HOMER D. HOUSE
Acting State Botanist

Noteworthy contributions. The most important addition to the State herbarium during the past year is the gift by Professor Charles S. Sheldon of Oswego, of his entire herbarium, numbering over 15,000 specimens. Professor Sheldon's collection contains specimens from every state of the union as well as from Mexico, Canada and several European countries. The New York State collections, made chiefly by Professor Sheldon between the years 1877 and 1895, alone number 1020 specimens. A more detailed account of this collection will be found in another place.

Mr Simon Davis of Brookline, Mass., presented the herbarium with a collection of 60 species of fungi native of the eastern United States. A large number of interesting flowering plants and fungi have also been received from Dr W. Haydon of Marshfield, Ore.

Scientific investigations. The limited amount of time available for field work was spent chiefly in a reconnaissance of the vegetation and its ecological relations, about the eastern end of Oneida lake, a region of extensive sandy barrens, swamps and bogs, in addition to the interesting vegetation of the shores and shallow

waters. This study, it is hoped, will be brought to a close during the season of 1915. Observations were also made upon the vegetation of several of the sphagnum bogs of central New York. It is highly desirable that these observations be brought together in a formal way at some future time. New localities for certain rare species are reported under "Notes on Local Floras" and "New or Interesting Species of Fungi."

Exchanges. It has been found desirable to distribute as exchanges many of the duplicate fungi and flowering plants of the herbarium, thus enriching our collections and making available much valuable space heretofore occupied by the stored material. Exchanges have been effected with Mr G. Newodowski of Kiev, Russia, from whom the herbarium has received a valuable collection of fungi, chiefly parasitic leaf forms, native of eastern Europe and the Russian Caucasus. From Brother Victorin, of Longueuil, Quebec, has been received in exchange a large collection of flowering plants representing the flora of our northern border.

Condition of the collections. Further progress has been made in the arrangement of the herbarium and with minor exceptions the collections are now in permanent form. Although there is on hand considerable material stored away in more or less inaccessible bundles, nevertheless practically all the valuable material has now been labeled and placed in proper sequence in the herbarium and thus made available for study. This has resulted in a great increase in the value of the herbarium for purposes of scientific research and is correspondingly appreciable to the numerous botanists who have had occasion to consult the collections during the past year.

Additions to the herbarium. The number of specimens of New York State species which have been added to the herbarium from current collections during the past year is 675, from contributions 336, from the Sheldon herbarium 1020; a total of 2031 specimens. Of the total number of specimens received, 112 were new to the herbarium and 19 species are described as new to science. The extralimital specimens of the Sheldon herbarium number 13,382.

The number of those who have contributed specimens is 33. This includes those who have sent specimens merely for identification and which were desirable additions to the herbarium.

Identifications. The number of identifications made of specimens sent or brought to the office by inquirers is 556. The number of persons for whom these identifications were made was 151.

PLANTS ADDED TO THE HERBARIUM

New to the herbarium

Aecidium lampsanicolum *Tranzsch.*
" lini *Dearness & House*
Apargia hispida (*L.*) *Willd.*
Ascochyta clematidina *Thümen.*
Asterina leemingii *E. & E.*
Asteroma ribicolum *E. & E.*
Ballota nigra *Linn.*
Borago officinalis *Linn.*
Bolbitius variicolor *Atkinson*
Botryosphaeria berengeriana var. weigeliae *Rehm*
Carex incomperta *Bicknell*
Campanula trachelium *Linn.*
Cercospora teucrii *E. & K.*
" argychamniae *Dearness & House*
" namae *Dearness & House*
Chaenorrhinum minus (*L.*) *Lange*
Chamaesyce humistrata (*Engelm.*) *Small*
Cleone spinosa *Linn.*
Coleosporium euphrasiae (*Schum.*) *Wint.*
" tussilaginis (*Pers.*) *Lev.*
Coniophora arida (*Fr.*) *Cooke*
Coniosporium lumulosum *Sacc.*
Coronilla coronata *Linn.*
Cucurbitaria caraganae *Karst.*
" elongata (*Fr.*) *Grev.*
Curreya peckiana *Sacc.*
Cylindrocolla urticae (*Pers.*) *Bon.*
Cylindrosporium spigeliae *Dearness & House*
Cytospora phomopsis *Sacc.*
Elscholtzia cristata *Willd.*
Dendrophoma phyllogena *Sacc.*
Eutypella stefansa (*Pers.*) *Rehm.*
Glycyrrhiza lepidota *Pursh*
Graphiothecium phyllogenum (*Desm.*) *Sacc.*
Gymnopilus permollis *Murrill*
" subviridis *Murrill*
Harpographium magnum *Sacc.*
Hieracium pratense *Tausch.*
Laestadia galactina *Dearness & House*
Lactaria obnubilis *Lasch.*
Leptosphaeria houseana *Sacc.*
Macrophoma peckiana *Dearness & House*
Melampsora helicoscopiae (*Pers.*) *Cast.*
" klebahni *Bubak*
" laricis-epitea *Kleb.*
Melampsorella symphyti (*DC.*) *Bubak*
Melanoleuca subpessundata *Murrill*
Micropeltis pitya *Sacc.*
Myriophyllum farwellii *Morong*
Nothomyces nigricans *Sacc.*
Phoma houseana *Sacc.*
Phomopsis daturae (*R. & F.*) *Sacc.*
" viticola *Sacc.*
Phyllosticta baccharidis *Dearness & House*
" chenopodii *Sacc.*
" galactis (*Cooke*) *E. & E.*
" mauraudiae *Dearness & House*
" medeolae *Dearness & House*
" nyssae *Cooke House*
" oakesiae *Dearness & House*
" orobella *Sacc.*
" pachysandrae *Dearness & House*
" rhexiae *Dearness & House*
Placosphaeria campanulae (*DC.*) *Bäuml.*
" celtidis *Dearness & House*
" stellatarum *Sacc.*
Pleuodomus destruens *Harter*
Potentilla monspielensis *Linn.*
Puccinia acrophila *Sydow*
" annularis (*Strauss*) *Wint.*
" bardanae *Corda*
" baryi (*Berk. & Br.*) *Wint*
" coronifera *Kleb.*

Puccinia herniariae *Unger*
" junci (*Strauss*) *Wint.*
" oreoselini (*Strauss*) *Körn.*
" simplex (*Körn.*) *Erikss. & Henn.*
" smilacearum-digraphidis *Kleb.*
" tanaceti *DC.*
" tragopogonis (*Pers.*) *Corda*
Pucciniasturm articum (*Lagerh.*) *Tranz.*
Ramularia delphinii *Dearness & House*
Rhabdospora clarkeana *Sacc.*
Richardia scabra *Linn. f.*
Rubus vermontanus *Blanchard*
Septoria breviuscula *Sacc.*
" cydoniae *Fckl.*
" darlingtoniae *Dearness & House*
" erythraeae *Dearness & House*
" lobeliae *Pk.* var. lobeliae-inflatae *Sacc.*
Septoria tinctoria *Dearness & House*
" trautvetteriae *E. & E.*
Sphaerella populnea *Sacc.*
Sphaeropsis visci (*Sollm.*) *Sacc.*
" peckiana *Dearness & House*
Sporodesmium mucosum *Sacc.*
" pilulare *Sacc.*
Stagonosporopsis haloxyli *H. Sydow*
Stipa comata *Trin. & Rupr.*
Thyridium ceanothi *Dearness & House*
Urocystis agropyri (*Preuss*) *Schroet.*
Uromyces fulgens *Bubak*
" glycyrrhizae (*Rabenh.*) *P. Magn.*
" heliotropii *Svedinski*
" salsolae *Reichardt*
" scutellatus (*Rabenh.*) *P. Magn.*
Viola fimbriatula x septentrionalis *Brainerd*
" " x sororia *Brainerd*
" incognita var. forbesii *Brainerd*
Venturia gaultheriae *Ell. & Ev.*

Not new to the herbarium

Aecidium clematidis *DC.*
" euphorbiae *Gmel.*
" frangulae *Schum.*
" rubellum *Gmel.*
" houstoniatum *Schw.*
" urticae (*Schum.*) *Rabenh.*
" violae *Schw.*
Agrostis maritima *Lam.*
" perennans (*Walt.*) *Tuckerm.*
Alnus mollis *Fernald*
Amanita velatipes *Atkinson*
Amelanchier canadensis (*L.*) *Medic.*
" intermedia *Spach*
" laevis *Wiegand*
" sanguinea (*Pursh*) *DC.*
Ammodenia peploides (*L.*) *Rupr.*
Anemone riparia *Fernald*
Apocynum androsaemifolium *Linn.*
" sibiricum *Jacq.*
Arabis brachycarpa (*T. & G.*) *Britton*
Arenaria serpyllifolia *Linn.*
Argentina anserina (*L*) *Rydb.*
Aristolochia clematitis *Linn.*
Aronia nigra (*Willd.*) *Britton*
Asterina gaultheriae *M. A. Curtis*
Artemisia stelleriana *Bess.*
Athyrium acrostichoides (*Sw.*) *Diels*
" pycnocarpon (*Michx.*) *Tidestrom*
Bartonia virginica (*L.*) *B.S.P.*
Batrachium trichophyllum (*A. Gray*) *Bosch*
Blephariglottis blephariglottis (*Willd.*) *Rydb.*
" ciliaris (*L.*) *Rydb.*
Boehmeria cylindrica (*L.*) *Sw.*
Boletus aureus *Linn.*
Boletinus cavipes (*Opat.*) *Kalchb.*
Botrychium dissectum *Spreng.*
" neglectum *Wood*
" obliquum oneidense *Gilbert*
Botryosphaeria quercuum (*Schw.*) *Sacc.*
Cakile edentula (*Bigel.*) *Hook.*
Callitriche heterophylla *Pursh*
Campanula aparinoides *Pursh*

Camptosorus rhizophyllus (*L.*) *Link*
Carex abacta *Bailey*
" arctata *Boott*
" atratiformis *Britton*
" aurea *Nuttall*
" cristatella *Britton*
" disperma *Dewey*
" eburnea *Boott*
" exilis *Dewey*
" flava *Linn.*
" folliculata *Linn.*
" glareosa *Wahl.*
" gracillima *Schw.*
" howei *Mackenzie*
" hystricina *Muhl.*
" intumescens *Rudge*
" lanuginosa *Michx.*
" leersii *Willd.*
" leptalea *Wahl.*
" limosa *Linn.*
" lupulina *Muhl.*
" maritima *O. F. Mueller*
" muhlenbergii *Schk.*
" pennsylvanica *Lam.*
" pennsylvanica *Lam.*
" plantaginea *Lam.*
" prasina *Wahl.*
" pseudo-cyperus *Linn.*
" squarrosa *Linn.*
" stipitata *Muhl.*
" swanii (*Fern.*) *Mackenzie*
" torta *Boott*
" tribuloides *Wahl.*
" tuckermanni *Dewey*
" trisperma *Dewey*
" vesicaria *Linn.*
Cassia marylandica *Linn.*
Castilleja acuminata (*Pursh*) *Spreng.*
Celtis occidentalis *Linn.*
Cenangium populneum (*Pers.*) *Rehm.*
Cenchrus carolinianus *Walt.*
Centaurea masculosa *Lam.*
Centaurium centaurium (*L.*) *W. F. Wight*
Cercospora callae *Peck*
" absinthii (*Pk.*) *Sacc.*
" comari *Peck*
" dubia *Wint.*
Ceriomyces auriflammeus (*B. & C.*) *Murrill*
" bicolor (*Peck*) *Murrill*
Ceriomyces communis (*Bull.*) *Murrill*
" retipes (*B. & C.*) *Murrill*
" scaber (*Bull.*) *Murrill*
" subtomentosus (*L.*) *Murrill*
Cetraria islandica (*L.*) *Ash.*
Chlorosplenium aeruginascens (*Nye*) *Karst.*
Chiogenes hispidula (*L.*) *T. & G.*
Cintractia caricis (*Pers.*) *Magn.*
Cladosporium fulvum *Cooke*
Coeloglossum bracteatum (*Willd.*) *Parl.*
Coelopleurum actaeifolium (*Michx.*) *C. & R.*
Comarum palustre *Linn.*
Clitocybe brumealis *Fries*
" clavipes (*Pers.*) *Fries*
" compressipes *Peck*
" inversa *Scop.*
" sudorifica *Peck*
Collybia butyracea (*Bull.*) *Fries*
" dryophila (*Bull.*) *Fries*
" lentioides *Peck*
" platyphylla *Fries*
" radicata (*Relh.*) *Fries*
" striatipes *Peck*
" strictipes *Peck*
" velutipes (*Curt.*) *Fries*
Corallorhiza maculata *Raf.*
Corticium investiens (*Schw.*) *Bres.*
" mutatum *Peck*
Cornus alternifolia *Linn. f.*
Cortinarius castaneus (*Bull.*) *Fries*
" cinnabarinus *Fries*
" cinnamoneus (*L.*) *Fries*
" collintius *Fries*
" distans *Peck*
Cortinellus rutilans (*Schaeff.*) *P. Karst.*
Crepidotus fulvotomentosus *Peck*
Criosanthes arietina (*L.*) *House*
Crocanthemum canadense (*L.*) *Britton*
Cronartium ribicolum *Dietr.*
Cryptogramma stelleri (*Gmel.*) *Prantl.*
Cryptotaenia canadensis (*L.*) *DC.*
Cyperus engelmanni *Steud.*

Cyperus filiculmis *Vahl*
" inflexus *Muhl.*
Cythraea bulbosa (*L.*) *House*
Cytospora leucostoma *Sacc.*
Deconica bryophila *Peck*
Dianthera americana *Linn.*
Discosia maculicola *Gerard*
Diatrypella betulina (*Peck*) *Sacc.*
Dimerosporium balsamicola (*Peck*) *E. & E.*
Dothidea sambuci (*Pers.*) *Fr.*
Dothidella junci (*Fr.*) *Sacc.*
Draba arabisans *Michx.*
Drosera longifolia *Linn.*
Dryopteris dryopteris (*L.*) *Britton*
" goldiana (*Hook*) *A. Gray*
" clintoniana (*D. C. Eaton*) *Dowell*
" dilatata (*Hoffm.*) *A. Gray*
" intermedia (*Muhl.*) *A. Gray*
Eccilia flavida *Peck*
" subacus *Peck*
" watsoni *Peck*
Elymus arenarius *Linn.*
" australis *Scribn. & Ball.*
Empetrum nigrum *Linn.*
Epilobium lineare *Muhl.*
Entoloma cuspidatum *Peck*
" modestum *Peck*
" nidorosum *Fries*
" rhodopolium (*Bolt.*) *Fries*
" salmoneum *Peck*
" sinuatum (*Pers.*) *Fries*
" strictius *Peck*
Equisetum fluvitale *Linn.*
" hyemale intermedium *A. A. Eaton*
Eriophorum alpinum *Linn.*
" angustifolium *Roth.*
" callitrix *Cham.*
" gracile *Koch*
" viridi-carinatum (*Engelm.*) *Fern.*
" virginicum *Linn.*
Eutypella maclurae (*Ell. & Ev.*) *Ell.*
Exoascus cerasi *Fckl.*
" insititiae *Sadebeck*
" pruni *Fckl.*
Fomes fraxinophilus (*Peck*) *Sacc.*
Fuscoporia ferruginea (*Schrad.*) *Murrill*
Galera hypnorum (*Batsch.*) *Fries*
" laterita *Fries*
" tenera *Fries*
Galium labradoricum *Wiegand*
Geum macrophyllum *Willd.*
" rivale *Linn.*
Glenospora melioloides *Curt.*
Gloeosporium coryli (*Desm.*) *Sacc.*
" hepaticae *Peck*
" sassafras (*Cooke*) *E. & K.*
Gnomonia petiolophila (*Peck*) *Berl & Vogl.*
Godronia Cassandrae *Peck*
Gymnadenopsis clavellata (*Michx.*) *Rydb.*
Gymnoconia interstitialis (*Schlecht.*) *Lagh.*
Gymnopilus flavida (*Schaeff.*) *Murrill*
" sapinea (*Fries.*) *Murrill*
" spumosa (*Fries*) *Murrill*
" squalida (*Peck*) *Murrill*
Halenia deflexa (*J. E. Sm.*) *Griseb.*
Halerpestes cymbalaria (*Pursh*) *Greene*
Hapalopilus rutilans (*Pers.*) *Murrill*
Hebeloma discomorbidum *Peck*
" parvifructum *Peck*
" pascuens *Peck*
Hibiscus moscheutos *Linn.*
Hieracium pilosella *Linn.*
Hierochloe odorata (*L.*) *Wahl.*
Hydnum adustum *Schw.*
" ochraceum *Pers.*
Hydrastis canadensis *Linn.*
Hydrophyllum virginanum *Linn.*
Hymenochaete agglutinosum *Ellis*
Hymenula galii *Peck*
Hypericum ellipticum *Hook.*
" majus (*A. Gray*) *Britton*
Hypholoma appendiculatum
" candolleanum *Fries*
" delineatum *Peck*
" rugocephalum *Atkinson*
" fasciculare (*Huds.*) *Quel.*
Hypocrea richardsonii *B. & M.*

Hygrophorus conicus (*Scop.*) *Fries*
" puniceus *Fries*
Hysterium prostii *Duby*
Ibidium beckii (*Lindl.*) *House*
" gracile (*Bigel.*) *House*
" plantagineum (*Raf.*) *House*
Ilysanthes dubia (*L.*) *Barnhart*
Inonotus radiatus (*Sow.*) *Karst.*
Irpex fuscescens *Schw.*
Irpiciporus lacteus (*Schw.*) *Murrill*
Isotria verticillata (*Willd.*) *Raf.*
Juncus balticus var. littoralis *Engelm.*
" brevicaudatus (*Engelm.*) *Fernald*
Juniperus horizontalis *Moench*
" sibirica *Burgsd.*
Kalmia polifolia *Wang.*
Lactaria desceptiva *Peck*
" grisea *Peck*
" hygrophoroides *B. & C.*
" lignyota *Fries*
" oculata (*Peck*) *Burlingham*
Lathyrus maritimus (*L.*) *Bigel.*
" myrtifolius *Muhl.*
Lentinus haematopus *Berk.*
Leontodon hispidus *Linn.*
Lepargyraea canadensis (*L.*) *Greene*
Lepiota americana *Peck*
" metulaespora *B. & Br.*
Leptasea aizoides (*L.*) *Haw.*
Leptonia serrulata (*Pers.*) *Fries*
" subserrulata *Peck*
Leptosphaeria doliolum (*Pers.*) *De Not.*
Leptothyrium periclymeum (*Desm.*) *Sacc.*
Ligusticum scothicum *Linn.*
Limodorum tuberosum *Linn.*
Limonium carolinianum (*Walt.*) *Britton*
Limnorchis hyperborea (*L.*) *Rydb.*
Liparis loesellii (*L.*) *Richard.*
Lobelia kalmii *Linn.*
Lonicera hirsuta *Eaton*
" oblongifolia (*Goldie*) *Hook.*
Lophodermium pinastri (*Schrad.*) *Cher.*
Lychnis flos-cuculi *Linn.*
Lycopodium annotinum *Linn.*
" inundatum *Linn.*
" tristachyum *Pursh*
Lysias hookeri (*Torr.*) *Rydb.*
" marcophylla (*Goldie*) *House*
" orbiculata (*Pursh*) *Rydb.*
Lysiella obtusata (*Pursh*) *Rydb.*
Lysimachia punctata *Linn.*
" vulgaris *Linn.*
Lythrum salicaria *Linn.*
Marasmius elongatipes *Peck*
" tomentosipes *Peck*
Mariscus mariscoides (*Muhl.*) *Kuntze*
Marsonia juglandis (*Lib.*) *Sacc.*
Melanoleuca sejuncta (*Sow.*) *Murrill*
" transmutans (*Peck*) *Murrill*
" terraeolens (*Peck*) *Murrill*
Melampsora larici-populini *Kleb.*
" lini (*Pers.*) *Desm.*
" vacciniorum *Link.*
Melampsoropsis cassandrae (*P. & C.*) *Arthur*
Melogramma bulliardi *Tul.*
Mertensia maritima (*L.*) *S. F. Gray*
Microsphaeria divaricata (*Wallr.*) *Lev.*
Moneses uniflora (*L.*) *A. Gray*
Montia lamprosperma *Cham.*
Naematelia atrata *Peck*
Naias flexilis (*Willd.*) *Rost. & Sch.*
Naucoria autumnalis *Peck*
" christinae *Fries*
" firma *Peck*
" sphagnophila *Peck*
" vernalis *Peck*
Nolanea conica *Peck*
Nymphaea rubrodisca (*Morong*) *Greene*
" variegata (*Engelm.*) *G. S. Miller*
Nyssa sylvatica *Marsh.*
Ophrys australis (*Lindl.*) *House*
" convallarioides (*Sw.*) *W. F. Wight*
" cordata *Linn.*
Oryzopsis racemosa (*Sm.*) *Ricker*
Oxybaphus hirsutus (*Pursh*) *Sweet*
Panicum columbianum *Scribn.*
" meridionale *Ashe*

Paxillus atrotomentosus (*Batsch.*) *Fries*
Parnassia caroliniana *Michx.*
Paspalum muhlenbergii *Nash*
Pedicularis palustris *Linn.*
Pellaea atropurpurea (*L.*) *Link*
Peniophora cinerea (*Fries*) *Cooke*
Peridermium cerebrum *Peck*
" comptoniae (*Arthur*) *Orton & Adams*
Persicaria amphibia (*L.*) *S. F. Gray*
Peronospora effusa (*Grev.*) *Rabenh.*
" ficariae *Tul.*
" viciae (*Berk.*) *De Bary*
Phaeolus sistotremoides (*Alb. & Schw.*) *Murrill*
Phragmidium subcorticium (*Schrank*) *Wint.*
Phyllachora ulmi (*Dur.*) *Fckl.*
Phyllitis scolopendrium (*L.*) *Hoffm.*
Phyllosticta asiminae *E. & K.*
" lantanoidis *Peck*
" pirina *Sacc.*
" tumoricola *Peck*
" cruenta (*Fr.*) *Kickx.*
Plantago aristata *Michx.*
" borealis *Lange*
" decipiens *Barneous*
Plasmopara nivea *Schroet.*
" viticola (*B. & C.*) *Berlese & De Toni*
Plicatura faginea (*Schrad.*) *P. Karst.*
Pluteolus callistus *Peck*
Poa eminens *J. S. Presl.*
Podosphaeria oxycanthae (*DC.*) *De Bary*
" tridoctyla (*Wallr.*) *De Bary*
Pogonia ophioglossoides *Linn.*
Polemonium vanbruntiae *Britton*
Poria attenuata *Peck*
Polygala pauciflora *Willd.*
" viridescens *Linn.*
Potentilla pennsylvanica *Linn.*
" recta *Linn.*
Primula farinosa var. macropoda *Fernald*
" mistassinica *Michx.*
Propolis faginea (*Schrad.*)
Prunus cuneata *Raf.*
Pseudomanus tumefaciens *E. Sm. & Town.*
Puccinastrum pyrolae (*Pers.*) *Dietel*
Puccinella angustata (*R. Br.*) *Rand & Redfield*
Puccinia aegopodii (*Schum.*) *Link*
" anemonies-virginianae *Schw.*
" arenariae (*Schum.*) *Schroet*
" bromina *Erikss.*
" coronata *Corda*
" emaculata *Schw.*
" galii (*Pers.*) *Schw.*
" lampsanae (*Schultz*) *Fckl.*
" menthae *Pers.*
" polygoni-amphibii *Pers.*
" phragmitis (*Schum.*) *Körn.*
" spergulae *DC.*
" triticina *Erikss.*
Pryola secunda *Linn.*
" uliginosa *Torrey*
Pyxidanthera barbulata *Michx.*
Ranunculus septentrionalis *Poir.*
Ramularia tulasnei *Sacc.*
" obovata *Fckl.*
Rhamnus alnifolia *L'Her.*
Rhexia virginica *Linn.*
Rhodiola rosea *Linn.*
Rhytisma ilicis-canadensis *Schw.*
Rosellinia glandiformis *Ell. & Ev.*
" aquilia (*Fr.*) *De Not.*
" ligniaria (*Grev.*) *Nits.*
" nutans (*C. & P.*) *Sacc.*
" subiculata (*Schw.*) *Sacc.*
Rostkovites subaureus (*Peck*) *Murrill*
Rubus hispidus *Linn.*
" setosus *Bigel.*
" triflorus *Rich.*
Russula foetens (*Pers.*) *Fries*
" lutea (*Huds.*) *Frics*
" modesta *Peck*
" ochrophylla *Peck*
" variata *Banning*
Sagina nodosa (*L.*) *Fenzl.*
Salicornia europea L. var. prostrata (*Pall.*) *Fern.*

Salix balsamifera *Barrett*
" candida *Fluegge*
" lucida *Muhl.*
" petiolaris *J. E. Smith*
" sericea *Marsh.*
Sanguisorba canadensis *Linn.*
Saururus cernuus *Linn.*
Schizonella melanogramma (*DC.*) *Schroet.*
Schmaltzia crenata (*Mill.*) *Greene*
Scirpus cyperinus (*L.*) *Kunth*
" americanus *Pers.*
" clintonii *A. Gray*
" paludosus *A. Nelson*
" rufus (*Huds.*) *Schrad.*
" rubrotinctus *Fernald.*
" validus *Vahl*
Scirrhia rimosa (*A. & S.*) *Fckl.*
Scrophularia leporella *Bicknell*
Sebacina pallida (*Schw.*) *Burt*
Senecio discoideus (*Hook.*) *Britton*
" pauperculus *Michx.*
" pseudo-arnica *Less.*
Septoria cornicola *Desm.*
" dalibardae *Peck*
" irregularis *Peck*
" ludwigiae *Cooke*
" poae-annuae *Bres.*
" podophyllina *Peck*
" polygalae *P. & C.*
" kalmiaecola (*Schw.*) *B. & C.*
" oenotherae *West.*
" ribis *Desm.*
" trillii *Peck*
" violae *West.*
" viridi-tingens *Curtis*
Serapias helleborine *Linn.*
Sibbaldiopsis tridentata (*Ait.*) *Rydb.*
Silene dichotoma *Ehrh.*
Solidago puberula *Nutt.*
" rugosa *Mill.*
" uliginosa *Nutt.*
Sparganium angustifolium *Michx.*
Spartina michauxiana *Hitchc.*
Sphacelotheca hydropiperis *DeBary*
Sphaerella colorata *Peck*
" gaultheriae *C. & P.*
Sphaerotheca castagnei *Lev.*
Sporocybe azaleae (*Peck*) *Sacc.*
Stachys aspera *Michx.*
Steironema ciliata (*L.*) *Raf.*
Stellaria borealis *Bigel.*
" humifusa *Rottb.*
" longifolia *Muhl.*
Stoisima cornuta (*Michx.*) *Raf.*
Stropharia stercoraria *Fries*
" semiglobata *Batsch.*
Streptopus roseus *Michx.*
Streptothrix fusca *Corda*
Suillellus frostii (*Russell*) *Murrill*
" luridus (*Schaeff.*) *Murrill*
Taphrina rhizophora *Johan.*
Thelephora pedicellata *Schw.*
" terrestris *Ehrh.*
Tilletia tritici (*Bjerk.*) *Wint.*
Tissa canadensis (*Pers.*) *Britton*
Trematosphaeria nuclearia (*De Not*) *Sacc.*
Triglochin maritima *Linn.*
" palustris *Linn.*
Triosteum aurantiacum *Bicknell*
Trillium cernuum *Linn.*
Trisetum spicatum (*L.*) *Richter*
Tubaria furfuracea *Pers.*
Urocystis anemones (*Pers.*) *Schroet.*
Uromyces caladii (*Schw.*) *Farlow*
" fabae (*Pers.*) *De Bary*
" ficariae (*Schum.*) *Lev.*
" dactylidis *Otth.*
" geranii (*DC.*) *Otth. & Wartm.*
" minor *Schroet.*
" pisi (*Pers.*) *De Bary*
" rumicis (*Schum.*) *Winter*
" scrophulariae (*Schum.*) *B. & Br.*
Ustilago longissima (*Sow.*) *Tul.*
Utricularia intermedia *Hayne*
" macrorrhiza *LeConte*
Vaccinium angustifolium *Ait.*
" atrococcum (*A. Gray*) *Heller*
" corymbosum *Linn.*
" pennsylvanicum *Lam.*
Vagnera trifolia (*L.*) *Morong*
Valeriana uliginosa (*Torr. & Gray*) *Rydb.*

Valsa leucostoma (*Pers.*) *Fries*
" brevis *Peck*
Veratrum viride *Ait.*
Vermicularia hepatica *Peck*
" coptina *Peck*
" peckii *Sacc.*
Veronica chamaedrys *Lynn.*
Viola incognita *Brainerd*
" rotundifolia *Michx.*
" selkirkii *Goldie*
Viola septentrionalis *Greene*
" sororia *Willd.*
Vitis-idaea vitis-idaea (*L.*) *Britton*
Waldsteinia fragarioides (*Michx.*) *Tratt.*
Washingtonia claytoni (*Michx.*) *Britton*
Zannichella palustris *Linn.*
Zizia aurea (*L.*) *Koch*
Zostera marina *Linn.*

CONTRIBUTORS AND THEIR CONTRIBUTIONS

Frank H. Ames, Brooklyn

Entoloma sinuatum *Fries*
Hypholoma candolleanum *Fries*

M. S. Baxter, Rochester

Agrostis perennans (*Walt.*) *Tuckerm.*
Carex squarrosa *Linn.*
" tuckermanni *Dewey*
Cyperus engelmanni *Steud.*
Festuca elatior arundinacea *Celak*
Oryzopsis racemosa (*Sm.*) *Richter*
Centaurea maculosa *Lam.*
Scrophularia leporella *Bickneli*
Paspalum muhlenbergii *Nash*
Stipa comata *Trin. & Rupr.*

Louis A. Blodgett, Schoharie

Campanula trachelium *Linn.*
Polemonium van-bruntiae *Britton*

Rev. Charles W. Boyd, Tupper Lake

Clavaria ligula *Fries*

Miss Elizabeth L. Bradley, Troy

Aristolochia clematitis *Linn.*

Ezra Brainard, Middlebury, Vt.

Rubus setosus *Bigel.*
Rubus vermontanus *Blanchard*

John N. Brown, Ogdensburg

Lentinus lepideus *Fries*
Phaeolus sistotremoides (*A. & S.*) *Schw.*

S. H. Burnham, Hudson Falls

Cetraria islandica (*L.*) *Ach.*
Marasmius tomentosipes *Peck*
Trematosphaeria nuclearia (*De Not.*) *Sacc.*

Miss M. C. Burns, Middleville

Lepiota americana *Peck*

J. H. Ten Eyck Burr, Cazenovia

Lactaria deceptiva *Peck*

Mrs Loomis Burrill, Little Falls

Serapias helleborine *Linn.*

Simon Davis, Brookline, Mass.

Bolbitius variicolor *Atkinson*
Collybia butyracea (*Bull.*) *Fries*
" lentinoides *Peck*
" striatipes *Peck*
" strictipes *Peck*
Clitocybe brumalis *Fries*
" compressipes *Peck*
" sudorifica *Peck*
Cortinarius cinnabarinus *Fries*
" cinnamoneus (*L.*) *Fr.*
" collinitus *Fries*
Crepidotus fulvotomentosus *Peck*
Deconica bryophila *Peck*
Eccilia flavida *Peck*
" subacus *Peck*
" watsoni *Peck*
Entoloma cuspidatum *Peck*
" modestum *Peck*
" nidorosum *Fries*
" rhodopolium (*Bolt.*) *Fries*
" salmoneum *Peck*
" sinuatum (*Pers.*) *Fries*
" strictius *Peck*
Flammula flavida (*Schaeff.*) *Fr.*
" spumosa *Fries*
" squalida *Peck*
Galera hypnorum (*Batsch.*) *Fries*
" laterita *Fries*
" sphagnorum *Pers.*
" tenera *Fries*
Hebeloma discomorbidum *Peck*
" parvifructum *Peck*
Hygrophorus conicus (*Scop.*) *Fries*
Hypholoma delineatum *Peck*
" rugocephalum *Atkinson*
Leptonia serrulata (*Pers.*) *Fries*
" subserrulata *Peck*
Lepiota metulaespora *Berk. & Br.*
Lactaria grisea *Peck*
" lignyota *Fries*
Marasmius varicosus *Fries*
Melanoleuca sejuncta (*Sow.*) *Murrill*
" terraeolens (*Peck*) *Murrill*
" transmutans (*Peck*) *Murrill*
Mycena alcalina *Fries*
Naucoria autumnalis *Peck*
" firma *Peck*
" christinae *Fries*
" sphagnophila *Peck*
" tabacina bicolor *Peck*
Nolanea conica *Peck*
Paxillus atrotomentosus (*Batsch.*) *Fries*
Pholiota togularis (*Bull.*) *Kickx*
Pluteolus expansus *Peck*
" callistus *Peck*
Psathyra helobina *Kalchbr.*
Sebacina pallida (*Schw.*) *Burt*

John Dearness, London, Ontario

Cladosporium fulvum *Cooke*
Gymnosporangium juniperi-virginianae *Schw.*
Hymenula galii *Peck*
Marsonia juglandis (*Lib.*) *Sacc.*
Melampsoropsis cassandrae (*P. & C.*) *Arthur*
Propolis faginea (*Schrad.*) *Karst.*
Puccinia bardanae *Corda*
" emaculata *Schw.*
Pucciniastrum arcticum (*Lagerh.*) *Tranz.*

W. T. Doherty, Canille, Ariz.

Fomes fraxinophilus (*Peck*) *Sacc.* Peridermium cerebrum *Peck*

G. H. French, Carbondale, Ill.

Coriolus prolificans (*Fr.*) *Murrill* Hapalopilis rutilans (*Fers.*) *Murrill*

W. J. French, Syracuse

Hibiscus moscheutos *Linn.*

L. L. Harter, Washington, D. C.

Pleuodomus destruens *Harter*

Dr M. T. Hutton, Putnam Station

Lepiota naucinioides *Peck*

J. M. Van Hook, Bloomington, Ill.

Rosellina aquilia (*Fries*) *De Not*
" glandiformis *Ell. & Ev.*
" ligniaria (*Grev.*) *Nits.*
" medullaris (*Wallr.*) *Ces. & De Not.*
" nutans (*C. & P.*) *Sacc.*
" palustris *Schroet.*
" pulveracea (*Ehrh.*) *Fckl.*
" subiculata (*Schw.*) *Sacc.*

Dr W. Haydon, Marshfield, Ore.

Boletinus cavipes (*Opat.*) *Kalchb.*
Argentina anserina (*L.*) *Rydb.*
Baccharis pilularis *DC.*
Cantharellus cibarius *Fries*
Clitocybe clavipes (*Pers.*) *Fries*
" inversa *Scop.*
Cercospora absinthii (*Peck*) *Sacc.*
Collybia velutipes (*Curt.*) *Fries*
Darlingtonia californica *Torrey*
Fragaria chiloensis (*L.*) *Duch.*
Gnaphalium chilense *Spreng.*
Gymnopilus permollis *Murrill*
Hosackia gracilis *Dougl.*
Hygrophorus inmutans *Murrill*
Hypholoma fasciculare (*Huds.*) *Quel.*
Melanoleuca subpessundata *Murrill*
Opulaster cordatus *Rydb.*
Plantago purshii *R. & B.*
Stropharia stercoraria *Fries*
Vancouveria hexandra (*Hook.*) *Morr. & Dec.*

Jackson & Perkins, Newark

Pseudomonas tumefaciens *E. Sm. & Town.*

C. E. Jenny, Fresno, Calif.

Lenzites trabea *Fries*

Charles A. Mabie, Holley

Lentinus lepideus *Fries*

Miss M. McKenny, Olympia, Wash.

Gymnopilus subviridis *Murrill*

Miss A. G. Moore, Monroe

Craterellus cantharellus (*Schum.*) *Fries*

G. Newodowski, Kiev, Russia

Aecidium clematidis *DC.*
" euphorbiae *Gmel.*
" frangulae *Schum.*
Aecidium lampsanicolum *Tranzschel*
" rubellum *Gmel.*
" urticae (*Schum.*) *Rabent.*

Albugo candida (*Pers.*) *Kuntze*
Botryosphaeria berengeriana var. weigeliae *Rehm.*
Cercospora dubia *Wint.*
Coleosporium euphrasiae (*Schum.*) *Wint.*
" tussilaginis *Pers.*
Cronartium rubicolum *Dietr.*
Cucurbitaria caraganae *Karst.*
" elongata (*Fr.*) *Grev.*
Cylindrocolla urticae (*Pers.*) *Bon.*
Erysiphe polygoni *DC.*
" tortilis (*Wallr.*) *Fr.*
" umbelliferarum *DeBary*
Eutypella maclurae (*E. & E.*) *Ell.*
" stefansa (*Pers.*) *Rehm.*
Exoascus cerasi *Fckl.*
" insititiae *Sadebeck*
" pruni *Fckl.*
Graphiothecium phyllogenum (*Desm.*) *Sacc.*
Gymnosporangium juniperinum (*L.*) *Fries*
Leptosphaeria doliolum (*Pers.*) *De Not.*
Melampsora helioscopiae (*Pers.*) *Cast*
" larici-epitea *Kleb.*
" larici-populini *Kleb.*
" lini (*Pers.*) *Desm.*
" klebahni *Bubak*
" vacciniorum *Link*
Melampsorella symphyti (*DC.*) *Bubak*
Melogramma bulliardi *Tul.*
Microsphaeria divaricata (*Wallr.*) *Lev.*
Peronospora alta *Fckl.*
" effusa (*Grev.*) *Rabenh.*
" ficariae *Tul.*
" viciae (*Berk.*) *DeBary*
Phragmidium subcorticium (*Schrank*) *Wint.*
Placosphaeria campanulae (*DC.*) *Bauml.*
" stellatarum *Sacc.*
Plasmopara nivea *Schroet.*
" viticola (*B. & C.*) *Berlese & DeToni*
Podosphaeria oxycanthae (*DC.*) *DeBary*
" tridactyla (*Wallr.*) *DeBary*
Puccinia acrophila *Sydow*
" aegopodii (*Schum.*) *Link*
" anemones-virginianae *Schw.*
" annularis (*Strauss*) *Wint.*
" arenaeiae (*Schum.*) *Schroet*
" argentata (*Schultz*) *Wint.*
" bardanae *Corda*
" baryi (*Ber. & Br.*) *Wint.*
" bromina *Erikss.*
" coronata *Corda*
" coronifera *Kleb.*
" galii (*Pers.*) *Schroet.*
" herniariae *Unger*
" junci (*Strauss*) *Wint.*
" lampsanae (*Schultz*) *Fckl.*
" menthae *Pers.*
" oreoselini (*Strauss*) *Körn.*
" phragmites (*Schum.*) *Körn.*
" polygoni-amphibü *Pers.*
" smilacearum-digraphidis *Kleb.*
" spergulae *DC.*
" taneceti *DC.*
" tragopogonis (*Pers.*) *Corda*
" triticina *Erikss.*
Schizonella melanogramma (*DC.*) *Schroet.*
Scirrhia rimosa (*Alb. & Schw.*) *Fckl.*
Septoria cynodontia *Fckl.*
" poae-annuae *Bres.*
Sphacelotheca hydropiperis *De Bary*
Sphaeropsis visci (*Solim.*) *Sacc.*
Sporodesmium mucosum *Sacc.*
Staganosporopsis haloxyli *Sydow*
Streptothrix fusca *Corda*
Taphrina rhizophora *Johans.*
Tilletia tritici (*Bjerk.*) *Wint.*
Uromyees dactylidis *Otth.*
" fabae (*Pers.*) *DeBary*
" ficaraie (*Schum.*) *Lev.*
" glycyrrhizae (*Rabenh.*) *P. Magn.*
" heliotropii *Svedinski*
" pisi (*Pers.*) *DeBary*
" rumicis (*Schum.*) *Wint.*

Uromyces scrophulariae (*Schum.*) *B. & Br.*
" scutellatus (*Rabenh.*) *P. Magn.*
" salsolae *Reichardt*
Urocystis agropyri (*Preuss*) *Schroet.*
" anemones (*Preuss*) *Scop.*
Ustilago anomala *T. Kunze*
" longissima *Sow.*

F. M. Rolfs, Clemson College, S. C.

Thelephora pedicellata *Schw.*

T. E. Wilcox, Washington, D. C.

Ceriomyces auriflammeus (*B. & C.*) *Murrill*

Mrs A. Shantz, Old Forge

Leottia lubrica *Pers.*

E. B. Sterling, Trenton, N. J.

Ceriomyces bicolor (*Peck*) *Murrill*
" retipes (*B. & C.*) *Murrill*
" subtomentosus (*L.*) *Murrill*
Cortinarius castaneus (*Bull.*) *Fries*
Hebeloma pascuens *Peck*
Inonotus radiatus (*Sow.*) *Karst.*
Lepiota procera (*Scop.*) *Fries*
Suillellus frostii (*Russell*) *Murrill*

J. A. Sweigert, Plattsburg

Peridermium comptoniae (*Arthur*) *Orton & Adams*

Brother Victorin, Longueuil, Quebec

Alnus mollis *Fernald*
Amelanchier laevis *Wiegand*
Ammodenia peploides (*L.*) *Rupr.* var. robusta *Fern.*
Aquilegia canadensis *Linn.*
Anemone riparia *Fernald*
Arabis brachycarpa (*T. & G.*) *Britton*
Cakile edentule (*Bigel.*) *Hook.*
Capnoides sempervirens (*L.*) *Borkh.*
Carex arctata *Boott*
" atratiformis *Britton*
" glareosa *Wahl.*
" lanuginosa *Michx.*
" maritima *O. F. Mueller*
" vesicaria *Linn.*
Castilleja acuminata (*Pursh*) *Spreng.*
Coelopleurum actaeifolium (*Michx.*) *Coult. & Rose*
Coeloglossum bracteatum (*Willd.*) *Parl.*
Draba arabisans *Michx.*
Eleocharis palustris (*L.*) *R. & S.* var. glaucescens (*Willd.*) *Gray*
Elymus arenarius *Linn.*
Epilobium palustre *Linn.*
Empetrum nigrum *Linn.*
Erigeron hyssopifolius *Michx.*
Eriophorum alpinum *Linn.*
" angustifolium *Roth*
" gracile *Koch*
Fissipes acaule (*L.*) *Small*
Galium asperellum *Michx.*
Geum rivale *Linn.*
" macrophyllum *Willd.*
Halenia deflexa (*J. E. Sm.*) *Griseb.*
Halerpestes cymbalaria (*Pursh*) *Greene*
Hicoria ovata (*Mill.*) *Britton*
Hieracium pilosella *Linn.*
Hierochloe odorata (*L.*) *Wahl.*
Iris hookeri *Penny*

Juncus brevicaudatus (*Engelm.*) *Fern.*
" balticus *Willd.* var. littoralis *Engelm.*
Juniperus horizontalis *Moench*
" sibirica *Burgsd.*
Kalmia angustifolia *Linn.*
Limnorchis hyperborea (*L.*) *Rydb.*
Lathyrus pratensis *Linn.*
Ligusticum scothicum *Linn.*
Limonium carolinianum (*Walt.*) *Britton*
Lysimachia punctata *Linn.*
" terrestris (*L.*) *B. S. P.*
Lysiella obtusata (*Pursh*) *Rydb.*
Lysias hookeri (*Torr.*) *Rydb.*
" orbiculata (*Pursh*) *Rydb.*
Mertensia maritima (*L.*) *S. F. Gray*
Mitella nuda *Linn.*
Moehringia lateriflora (*L.*) *Fenzl.*
Moneses uniflora (*L.*) *A. Gray*
Montia lamprosperma *Cham.*
Oenothera muricata *Linn.*
Ophrys convallarioides (*Sw.*) *Wight*
" cordata *Linn.*
Dasiphora fruticosa (*L.*) *Rydb.*
Panicularia nervata (*Willd.*) *Kuntze*
Pedicularis canadensis *Linn.*
" palustris *Linn.*
Plantago boreale *Lange*
" decipiens *Barneous*
Poa eminens *J. S. Dresl.*
Potentilla pennsylvanica *Linn.*
Primula farinosa var. macropoda *Fernald*
Puccinella angustata (*R. Br.*) *Rand & Redfield*
Pyrola secunda *Linn.*
" uliginosa *Torrey*
Ranunculus septentrionalis *Poir.*
Rubus triflorus *Rich.*
Rumex obtusifolius *Linn.*
Salicornia europea var. prostrata (*Pall.*) *Fernald*
Salix balsamifera *Barratt*
Sagina nodosa (*L.*) *Fenzl.*
Sanguisorba canadensis *Linn.*
Saxifraga virginiensis *Michx.*
Scirpus americanus *Pers.*
" clintonii *A. Gray*
" cyperinus (*L.*) *Kunth*
" paludosus *A. Nels.*
" rubrotinctus *Fernald*
" rufus (*Huds.*) *Schrad.*
Senecio discoideus (*Hook.*) *Britton*
" pauperculus *Michx.*
" pseudo-arnica *Less.*
Stellaria borealis *Bigel.*
" humifusa *Rottb.*
Sparganium angustifolium *Michx.*
Spartina michauxiana *Hitchc.*
Streptopus roseus *Michx.*
Sibbaldiopsis tridentata (*Ait.*) *Rydb.*
Tissa canadensis (*Pers.*) *Britton*
Trientalis americana (*Pers.*) *Pursh*
Triosteum aurantiacum *Bicknell*
Trillium erectum *Linn.*
" grandiflorum *Salisb.*
Triglochin maritima *Linn.*
" palustre *Linn.*
Trisetum spicatum (*L.*) *Richter*
Vagnera racemosa (*L.*) *Morong*
" stellata (*L.*) *Morong*
Vaccinium angustifolium *Ait.*
" canadense *Kalm.*
" corymbosum *Linn.*
Viburnum lentago *Linn.*
Viola conspersa *Reichenb.*
Vitis-idaea vitis-idaea (*L.*) *Britton*
Washingtonia claytoni (*Michx.*) *Britton*
Zannichella palustris *Linn.*
Zizia aurea (*L.*) *Koch*
Zostera marina *Linn.*

D. B. Young, Albany

Naucoria vernalis *Peck*

THE HERBARIUM OF CHARLES S. SHELDON

BY HOMER D. HOUSE

The herbarium of Professor Charles S. Sheldon of Oswego, N. Y., was presented to the State Museum during the summer of 1914. The herbarium represents the botanical activity of a lifetime on the part of Professor Sheldon, numbering over 14,000 mounted specimens from every portion of the United States, Canada, Mexico and Europe. Several valuable exissicati are represented in the collection, including Pringle (Mexico), Curtis (Florida), Langlois (Louisiana) and several others.

Professor Charles S. Sheldon was born in Oswego, and received his early education in the public and high schools of that city. He was graduated from the Oswego Normal School in 1875. The next year was spent under Dr James Hall, arranging the State collection of minerals at Albany. From 1876 to 1880 Professor Sheldon was a student at Cornell University, from which he was graduated with honor. While at Cornell Professor Sheldon developed under Doctor Prentiss, then professor of botany, a love for the study of botany which resulted in the formation of an herbarium destined to become one of the largest private collections in the State.

For the next thirty-four years Professor Sheldon followed the profession of teaching, beginning with the public schools of Alexandria Bay, N. Y. (1881–83), then as head of the science department of the Missouri State Normal School at Kirkville, Mo. (1883–93), and the chair of biology in the State Normal School at Oswego, N. Y. (1893–1914).

During his years in Missouri, Professor Sheldon spent his summers botanizing in the western states and territories, Nevada and Utah being the only states not visited. His collections in this region represent nearly 1500 different species. After coming to Oswego his opportunities to collect became more limited and most of his spare moments were devoted to the mounting and systematizing of his collections and enlarging his hebarium by means of extensive exchanges, until the collection contained close to 20,000 specimens. Owing to insect depredations, many specimens were ruined, so that the collection at present contains about 15,000 good specimens, exclusive of about 300 duplicates.

The composition of Professor Sheldon's herbarium is shown in the following enumeration of the collectors whose collections are represented by mounted specimens:

C. G. Pringle, Mexico (2351), Arizona (195), Texas and California (20).	2566
Charles S. Sheldon, western states, chiefly from Colorado with some from Oklahoma, Texas, Arizona and Oregon (810); Missouri (490); vicinity of Washington, D. C. (300) and Martha's Vineyard (175)..	1775
A. E. Lomax, European plants	1686
A. H. Curtiss, plants of Florida	1025
Charles S. Sheldon, plants of New York collected chiefly by Professor Sheldon in Oswego and Tompkins counties	1020
C. F. Sonne, plants of California	400
H. E. Hasse, plants of California with some from Arkansas	445
J. H. Sandberg, plants of the northwestern states, including collections by J. H. Sandberg and J. B. Leiberg, and some Minnesota plants collected by Doctor Sandberg	380
Thomas Howell, plants of Washington and Oregon	355
A. B. Langlois, plants of Louisiana	345
Biltmore herbarium, southern states	280
S. B. Parish, plants of southern California	250
J. C. Alling, plants of Colorado (120) and Japan (114)	234
G. R. Vasey, plants from Florida, Texas, New Mexico, Michigan and the Pacific coast	141
W. N. Suksdorf, plants of Washington	120
Michener and Bioletti, plants of California	115
George W. Letterman, plants from Colorado, Texas and Pacific coast	110
E. Wilkinson, plants from the Santa Eulalia plains and hills, Chihuahua, Mexico	105
C. R. Orcutt, plants from southern California and northern Lower California	90
J. W. Chickering, jr, plants from the mountains of North Carolina and New England	85
John Donnell Smith, plants of Maryland and the southeastern states..	76
H. H. Rusby, plants of Arizona	56
Miscellaneous collections: include plants from George B. Aiton (Idaho), Mrs M. E. P. Ames (California), C. F. Baker (Colorado), Baker and Earle (Alabama), H. C. Beardslee (Ohio and North Carolina), J. Blake (New England), F. Blanchard (Vermont), F. H. Burglehaus (Minnesota and Wisconsin), B. F. Bush (Missouri), B. P. Clark (New England), C. A. Davis (Michigan), H. M. Denslow (Illinois), L. S. Doud (New England), Dr K. O. Foltz (Ohio), C. D. Fretz (Pennsylvania), H. A. Green (New Jersey), A. A. Heller (Pennsylvania and North Carolina), Mr and Mrs G. H. Hicks (Colorado and Michigan), Mr and Mrs J. G. Lemmon, (California and Arizona), J. H. Oyster (Kansas), A. F. Rote (Wisconsin), C. C. Schmidt (Minnesota), H. A. Sheldon (California), Emma A. Shumway (Washington), A. H. Young (Indiana) and numerous other collectors	2744
Total number of specimens	14,403

The New York State specimens from Professor Sheldon's herbarium number 1020, of which the following should be recorded for their rarity or for the record of distribution which they establish.

Albany county

Amaranthus crispus (*Lesp. & Thev.*) *A. Braun*

Cayuga county

Moneses uniflora (*L.*) *A. Gray*
Pyrola chlorantha *Sw.*

Chemung county

Hydrangea arborescens *Linn.*
Magnolia acuminata *Linn.*
Polemonium reptans *Linn.*

Dutchess county

Adlumia fungosa (*Ait.*) *Greene*

Erie county

Clinopodium glabrum (*Nutt.*) *Kuntze*
Corispermum hyssopifolium *Linn.*
Clintonia umbellulata (*Michx.*) *Torr.*
Glycyrrhiza lepidota *Nutt.*

Hamilton county

Lobelia dortmanna *Linn.*

Herkimer county

Cytherea bulbosa (*L.*) *House*
Halenia deflexa (*Sm.*) *Griseb.*

Lewis county

Ophrys convallaroides (*Sw.*) *Wight*

Livingston county

Jeffersonia diphylla (*L.*) *Pers.*

Madison county

Phyllitis scolopendrium (*L.*) *Hoffm.*

Oneida county

Lepargyraea canadensis (*L.*) *Greene*

Onondaga county

Anticlea elegans (*Pursh*) *Rydb.*
Halerpestes cymbalaria (*Pursh*) *Greene*
Juncus gerardi *Loisel.*

Oswego county

Agalinis paupercula (*A. Gray*) *Britton*
Anemone cylindrica *A. Gray*
Andropogon furcatus *Muhl.*

Oswego county (continued)

Arethusa bulbosa *Linn.*
Ballota nigra *Linn.*
Bartonia virginica (*L.*) *B. S. P.*
Batrachium circinatum (*Sibth.*) *Rchb.*
Bidens beckii *Torrey*
Blephariglottis leucophaea (*A. Gray*) *Rydb.*
Botrychium silaifolium *Presl.*
" simplex *E. Hitchc.*
Clinopodium vulgare *Linn.*
Centaurium centaurium (*L.*) *Wight*
Dryopteris hexagonoptera (*Michx.*) *C. Chr.*
Eleocharis mutata (*L.*) *R. & S.*
" robbinsii *Oakes*
Equisetum littorale *Kuehl*
Eriophorum callitrix *Cham.*
Gaura parviflora *Dougl.*
Grindelia squarrosa (*Pursh*) *Dunal*
Heteranthera dubia (*Jacq.*) *MacM.*
Hieracium pilosella *Linn.*
Hyoscyamus niger *Linn.*
Isotria verticillata (*Willd.*) *Raf.*
Juncus balticus *Linn.*
" torreyi *Coville*
Lathyrus maritimus (*L.*) *Bigel.*
" myrtifolius *Muhl.*
Lecticula resupinata (*B. D. Greene*) *Barnhart*
Lychnis chalcedonica *Linn.*
" flos-cuculi *Linn.*
Lythrum alatum *Pursh*
" salicaria *Linn.*
Muhlenbergia willdenowii *Trin.*
Ophrys australis (*Lindl.*) *House*
Ophioglossum vulgatum *Linn.*
Potentilla recta *Linn.*
Ranunculus obtusiusculus *Raf.*
Razoumofskya pusilla (*Peck*) *Kuntze*
Rynchospora macrostachya *Torrey*
Scheuchzeria palustris *Linn.*
Utricularia gibba *Linn.*

Tompkins county

Batrachium trichophyllum (*Chaix*) *F. Schultz*
Aplectrum hyemale (*Muhl.*) *Torrey*
Disporum lanuginosum (*Michx.*) *Nichols*
Gymnocladus dioica (*L.*) *Koch*
Lathyrus ochroleucus *Hook.*
Lespedeza capitata *Michx.*
Parnassia caroliniana *Michx.*
Pinus resinosa *Ait.*
Pinguicula vulgaris *Linn.*
Primula mistassinica *Michx.*
Schmaltzia crenata (*Mill.*) *Greene*
Trollius laxus *Salisb.*

Wyoming county

Lysias orbiculata (*Pursh*) *Rydb.*

NEW OR INTERESTING SPECIES OF FUNGI

BY HOMER D. HOUSE

Aecidium lini Dearness & House, sp. nov.

Aecia caulicolous and amphigenous but mostly hypophyllous, in irregular groups or scattered, on discolored areas which are yellowish at first and finally reddish brown, small, 200 μ in diameter; peridium pale yellow, erose-truncate or lacerate and recurved, rising about 50 μ over the ruptured cuticle, cells rhomboidal, wider distally, overlapping, prominently verrucose, variable in size, averaging about 22 by 15 μ, wall 4–5 μ thick; aeciospores yellow, globose to ellipsoid, 18 to 22 by 16 μ, wall minutely verrucose, hardly 2 μ thick.

On stems and leaves of Linum virginianum. On herbarium specimens collected by Dr Charles H. Peck at Amagansett, Long Island, N. Y., July (the year not given). Type in the herbarium of the New York State Museum.

Ascochyta clematidina Thumen

North Greenbush, on living leaves of Clematis virginiana. H. D. House, *no. 247,* October 10, 1914.

Asteroma ribicolum E. & E.

North Greenbush, on living leaves of Ribes americana. H. D. House, *no. 248,* October 10, 1914. This and the last mentioned species are both new to the State flora.

Cercospora dubia (Riess) Wint.

Albany, on living leaves of Chenopodium album. H. D. House, October 20, 1914.

Cercospora teucrii E. & K.

Orient Point, Suffolk county, Long Island, on living leaves of Teucrium canadense. Roy Latham, August 14, 1911. New to the State flora.

Coniosporium lumulosum Sacc.

Tupper Lake, on dead wood of Pinus strobus. H. D. House, August 26, 1913. Cotype.

Cortinarius distans Peck

Oneida, Madison county. H. D. House, August 1914. The type locality is Greenbush, Rensselaer county, and the species has also been collected in the counties of Albany, Essex, Suffolk and Warren.

Curreya peckiana Sacc.

Tupper Lake, on dead stems of Nemopanthes mucronata. H. D. House, August 1913. Cotype.

Cytospora phomopsis Sacc.

Albany, on dead twigs of Sassafras variifolium. Cotype. Other twigs of the same collection showed the presence of the following additional species: Sphaeropsis sassafras E. & E. Sphaeropsis seriata Peck; Valsa subclypeata Cke. & Peck.

Dendrophoma phyllogena Sacc.

Eaton, Madison county, on living and languishing leaves of Chamaedaphne calyculata. H. D. House, August 30, 1913. Cotype.

Dothidella junci (Fr.) Sacc.

(Phyllachora junci *Fckl.*; Dothidea junci *Fr.*)

Albany, on dead and languishing stems of Juncus tenuis, H. D. House, August 1913. Also collected at Cedarville, Herkimer county, by Doctor Peck.

Harpographium magnum Sacc.

Near Albany, on dead stems of Prunus cuneata. H. D. House, July 1913. Cotype.

Hebeloma peckii nom. nov.

Hebeloma palustre Peck. N. Y. State Mus. Bul. 170. p. 20. 1915 (not Hebeloma palustre Peck. N. Y., State Mus. Bul. 25, p. 649. 1899).

Lactaria hygrophoroides B. & C.

(L. distans *Peck*)

Oneida, Madison county. H. D. House, August 1914.

Lactaria oculatus (Peck) Burlingham

(L. subdulcis var. oculatus *Peck*)

Thick leaf mold in deciduous woods near Oneida, Madison county. H. D. House, August 1914.

Lactaria obnubilis Lasch

A small species resembling L. subdulcis; pileus 1–2.5 cm broad, stem 2–5 cm long; the pileus convex to nearly plane with a

distinct darker colored umbo in the center which becomes very prominent and acute in drying. The lamellae are somewhat lutescent when young becoming brownish in older specimens.

Common in sunny sphagnum places in open woods near Oneida. H. D. House, August 1914. New to America.

Leptosphaeria houseana Sacc.

Albany, on dead stems of Thalictrum dioicum. H. D. House, April 1914. Cotype.

Macrophoma celtidicola Dearness & House, sp. nov.

Pycnidia depressed-globose, carbonous, scattered, seated on the cortex, erumpent through the cuticle, 180 μ broad; spores hyaline, 1–3 nucleate and grumous, obovate to oblong, rounded at the ends, 20–33 by 9–15 μ, on basidia of variable length, mostly 3–4 μ in thickness.

On dead twigs of Celtis occidentalis. Northampton, Fulton county. H. D. House, *no. 14.15a*, May 27, 1914. Type in the herbarium of the New York State Museum.

Marasmius elongatipes Peck

Oneida, Madison county. H. D. House, August 1914.

Micropeltis pitya Sacc.

Tupper Lake, on dead leaves of Abies balsamea. H. D. House, August 26, 1913. Cotype.

Peronospora effusa (Grev.) Rabenh.

Albany, on living leaves of Chenopodium album. H. D. House, October 20, 1914.

Phoma houseana Sacc.

Featherstone lake, Schenectady county, on dead stems of Vaccinium corymbosum. H. D. House, July 27, 1913. Cotype.

Phomopsis viticola Sacc.

Albany, on dead stems of Vitis aestivalis. H. D. House, March 1914. New to the State flora.

Phomopsis daturae (R. & F.) Sacc.

Albany, on dead steams of Datura stramonium. H. D. House, July 1913. New to the State flora.

Nothomyces nigricans Sacc.

Near Oneida, Madison county, on dead bark of Carpinus caroliniana. H. D. House, July 22, 1913. Cotype.

Phyllosticta baccharidis Dearness & House, sp. nov.

Spots flesh colored to pale ferruginous, subcircular, determined by the large veinlets, usually visible on both surfaces of the leaf and similar, but in some cases showing on the upper surface only, with a very distinct concolorous raised border, tending to be deciduous, 3–8 by 2–6 mm; pycnidia dark, amphigenous but more numerous on the upper surface of the spot, as many as thirty to a spot, round perforate but sometimes hysteriiform, 50–115 μ, mostly about 75 μ in diameter; spores hyaline, reniform, usually nucleate at each end, 4–6 by 3 μ.

On living leaves of Baccharis halimifolia Linn. Orient Point, Long Island. Roy Latham, August 14, 1911. Type in the herbarium of the New York State Museum.

Phyllosticta chenopodii Sacc.

Albany, on living leaves of Chenopodium album Linn. H. D. House, October 20, 1914. Apparently new to America as the specimens distributed in the North American Fungi, *no. 1158*, under this name are Septoria atriplicis.

Phyllosticta medeolae Dearness & House, sp. nov.

Spots reddish or gray-red areas beginning at the tips of the leaves and extending in some cases over half of the leaf; pycnidia black, sulcate, epiphyllous, scattered, about 100 μ in diameter; spores hyaline, sometimes guttulate, linear-oblong, 12–15 by 2–3 μ.

On living or languishing leaves of Medeola virginiana Linn. near Albany. H. D. House, *no. 14.137*, September 12, 1914.

Phyllosticta lantanoides Peck

Albany, on living leaves of Viburnum cassinoides Linn. H. D. House, September 12, 1914. Originally described from Caroga, on leaves of Viburnum alnifolium.

Phyllosticta nyssae Cooke

Karner, Albany county, on living leaves of Nyssa sylvatica Marsh. H. D. House, October 3, 1914. Apparently new to the State.

Phyllosticta oakesiae Dearness & House, sp. nov.

Spots colorless, translucent, surrounded by an indistinct border from which a reddish stain extends into the leaf tissues, one-half to 1 cm broad; pycnidia dark brown, epiphyllous but visible from beneath, 100–200 μ in diameter; spores hyaline, grumous or guttulate, elliptic to fusoid, 9–22 by 5–7 μ.

On languishing leaves of Uvularia (Oakesia) sessilifolia Linn. Karner, Albany county. H. D. House, *no. 14.218*, October 8, 1914. Type in the herbarium of the New York State Museum.

Phyllosticta orobella Sacc.

On languishing leaves of the Beach pea, Lathyrus maritimus (Linn.) Bigel. Orient Point, Long Island. Roy Latham, September 11, 1911. New to America. The spores are 2-guttulate and 7–11 by 3 μ.

Placosphaeria celtidis Dearness & House, sp. nov.

Stromata scattered, lenticel like, 1–2 by 1 mm, pycnidia 3–8 in a stroma, cortical, erumpent through the cuticle, carbonous, conical, 100–160 μ; spores issuing in cirrhi in the water, hyaline to amber, mostly 2-nucleate, 5–8 by 3–3.5 μ.

On dead twigs of Celtis occidentalis Linn. Saugerties. Dr Charles H. Peck, May. Type in the herbarium of the New York State Museum.

Puccinia tenuis (Schw.) Burrill, I.

(Aecidium tenue *Schw.*)

On leaves of Eupatorium ageratoides Linn. Near Hannibal, Oswego county. H. D. House, *no. 14.36*, June 27, 1914.

This species has also been collected in the Catskill mountains upon the same host by Dr Charles H. Peck, and near Ottawa, Canada, by Dr J. M. Macoun, *no. 156*, June 13, 1903.

Septoria breviuscula Sacc.

Eaton, Madison county, on languishing and dead leaves of Linnaea americana. H. D. House, August 30, 1913. Cotype.

Septoria lobeliae Pk. var. **lobeliae-inflatae** Sacc.

Albany, on living leaves of Lobelia inflata. H. D. House, July 1913. Cotype.

Sphaerella populnea Sacc.

Tupper Lake, on dead areas of living leaves of Populus balsamifera, associated upon the same leaves with Septoria populicola Peck. H. D. House, August 22, 1913. Cotype.

Sporodesmium pilulare Sacc.

Albany, on dead bark of Juniperus virginiana. H. D. House, July 1913. Cotype.

Rhabdospora clarkeana Sacc.

Sand lake, Rensselaer county, on dead stems of Aquilegia canadensis. H. D. House, July 4, 1913. Cotype. Named in honor of Dr J. M. Clarke, Director of the New York State Museum.

Ramularia obovata Fckl.

Karner, Albany county, on living leaves of Rumex obtusifolius. H. D. House, *no. 250,* October 8, 1914.

Russula variata Banning.

A common species in the sandy oak woods near Sylvan Beach, Oneida county, at the eastern end of Oneida lake. Collected there in August 1914, by H. D. House.

Venturia gaultheriae E. & E.

Karner, Albany county, on living leaves of Gaultheria procumbens. H. D. House, *no. 212,* October 8, 1914.

Macrophoma peckiana Dearness & House, sp. nov.

Pycnidia scattered, sometimes confluent, seated on the phloem fibers and raising the epidermis into oval, ruptured pustules 1 by ¾ mm; the short or flat black ostiola visible usually through a gray pulverulent layer of the disorganized cortex; spores hyaline, 10–12 by 4–4½ μ, wall 1 μ thick, on short basidia.

On dead twigs of Ceanothus americanus Linn. North Greenbush, Rensselaer county, collected by Dr C. H. Peck.

Thyridium ceanothi Dearness & House, sp. nov.

Perithecia carbonous, thickly and evenly scattered, globose, 160–360 μ, raising the epidermis through which shows the shining black stromatic shield; ostiola short punctiform; asci paraphysate, clavate,

stipitate, the stipe lengthening in water in extreme cases to 300 μ; p. sp. 75–90 by 6–12 μ; sporidia subbiseriate, triseptate, cells in some of the spores septate lengthwise (muriform); rounded and wider at the upper end, subacute at the lower end, smoky brown, 15–20 μ by 5–6 μ.

On dead twigs of Ceanothus americanus Linn. near Albany, N. Y., H. D. House, *no. 14.255* November 1, 1914. Type in the herbarium of New York State Museum.

Tyromyces spraguei (B. & C.) Murrill

Catskill, N. Y., on an oak stump. H. D. House, *no. 14.39*. August 19, 1914.

NEW OR NOTEWORTHY EXTRALIMITAL FUNGI

BY HOMER D. HOUSE

Cercospora argythamniae Dearness & House sp. nov.

Spots beginning as a yellowish green discoloration of the naturally purplish leaf, not determinate; the fruiting part with a definite yellowish or brownish border surrounded by a greenish rim, opaque when held up to the light, 2–4 mm in diameter and thickly dotted with the dark tubercular bases of the tufts of conidia; conidia arising from short or obsolete hyphae, pale brown when viewed with reflected light; amphigenous, obclavate, 15–40 μ by 2 μ above to 3 or even 3½ μ near the base, indistinctly 1–3 septate.

On Argythamnia mercurialina Muell. Caddo, Indian Territory (Oklahoma), June 22, 1891. Charles S. Sheldon.

Related to Cercospora crotonifoliae Cooke, which is epiphyllous and has cylindrical spores.

Gymnopilus subviridis Murrill, sp. nov.

Pileus convex to nearly plane, circular, 8–10 cm broad; surface dry, dull green with a bluish green bloom, becoming glabrous with age; margin very involute, undulate, not at all appendiculate; context greenish yellow with an agreeable odor; lamellae deeply emarginate, broad, inserted, distant, brownish green, uneven on the edges; spores broadly ovoid to subglobose, ferruginous, asperulate, about 5 by 3.5–4 μ; stipe long, slender, flexuous, largest at the middle, concolorous, staining brownish, fleshy-fibrous, greenish within, reaching 10–15 cm in length and 1 cm in thickness.

Type collected on a decayed fir stump at Olympia, Wash., November 27, 1914, by Miss M. McKenny (Herb. N. Y. State Museum). This is an interesting addition to the large number of species of this genus from the Pacific coast. It may readily be recognized by its green color. Two other species, G. subflavidus Murrill and G. viridans Murrill, become green spotted when handled, but they are entirely different from Miss McKenny's plant. For the benefit of those using Saccardo's nomenclature, this species is recombined as Flammula subviridis Murrill.

Cercospora absinthii (Peck) Sacc.

Marshfield, Oregon, on living leaves of Artemisia suksdorfii Piper. Dr W. Haydon, *no. 515*, September 9, 1914. The

fungus was found abundant and even in better condition than the type described by Doctor Peck as Helminthosporium absinthii, on Artemisia absinthium from North Elba, N. Y.

Cercospora namae Dearness & House, sp. nov.

Spots pale brown, immarginate; hyphae tufted, sooty-brown, short, distinctly visible under the hand lens, epiphyllous or at least mostly so; conida subcylindrical, hyaline, curved, 45–100 μ, mostly about 75 μ by 2.5 μ.

On Nama ovatum (Nutt.) Britton, (Hydrolea ovata Nutt.) Crebs, Indian Territory (Oklahoma). Charles S. Sheldon, August 21, 1891. Type in the herbarium of New York State Museum.

Cylindrosporium spigeliae Dearness & House, sp. nov.

Spots circular, grayish, 1–5 mm broad, with a distinct dark border about .5 mm wide; similar on both surfaces of the leaf; acervuli amphigenous, numerous, especially on the lower surface of the leaf, 50–90 μ, nearly concolorous but with somewhat darker margin; sporules hyaline, mostly straight, very obscurely if at all septate, but somewhat granular, 15–35 by 2 μ.

On living leaves of Spigelia anthelmia Linn. Elliott's Key, Florida. A. H. Curtiss, *no. 5454*, July 4, 1895. Type in herbarium of New York State Museum.

Laestadia galactina Dearness & House, sp. nov.

Perithecia dark brown, subcuticular, thickly and evenly scattered, mostly epiphyllous, globose, flattish but not depressed, 100–230 μ in diameter; asci aparaphysate, broadest near the middle, 8-spored, short-stipitate; spores 60–75 by 25 μ; sporidia hyaline, grumous to finely guttulate, 25–30 by 6–7 μ, rounded at the ends.

On dead and languishing leaves and petioles of Galax aphylla Linn. Biltmore, N. C. H. D. House. June 1913. Type in herbarium of New York State Museum.

Phyllosticta maurandiae Dearness & House, sp. nov.

Spots thin and circular, white with a raised border but no contiguous discoloration, scattered, small, 1–2 mm in diameter; pycnidia 0–21 on a spot, distinctly visible from both sides of the leaf, reddish, subglobose, 90–144 μ in diameter; spores hyaline, flat, oval, minute, 3.5–4 by 1 μ when measured on their edges, 3.5–4 by 2.75–3 μ when measured on their face, distinctly 2-nucleate.

On living leaves of Maurandia semperflorens Ort. Monte Alban, Oaxaca, Mexico. C. G. Pringle, *no. 4786*. August 14, 1894. Type in herbarium of New York State Museum.

Phyllosticta pachysandrae Dearness & House, sp. nov.

Spots ashen, becoming sordid brown, fruiting parts translucent, at first circular, 2–5 mm broad and later becoming confluent and breaking down the leaf in large areas along the margin; pycnidia epiphyllous, globose-conic, perforate at summit, brown, 90–110 μ; spores minute, very numerous, hyalin, oblong, 4.5–6 by 1 μ.

On living leaves of Pachysandra procumbens Michx. cultivated in the Biltmore Nurseries at Biltmore, N. C. H. D. House, June, 1913. Type in herbarium of New York State Museum.

Phyllosticta rhexiae Dearness & House, sp. nov.

Spots reddish brown, 1.5–2 mm in diameter, with a white center bearing a single pycnidium, similar on both surfaces of the leaf; pycnidia solitary in the white center of the spot, epiphyllous, brown, minute, 40–50 μ in diameter; spores minute, subhyaline, oblong or nearly so, 3 by 1 μ.

On living and languishing leaves of Rhexia ciliosa Michx. Jacksonville, Fla. A. H. Curtiss, June 24, 1896.

Septoria darlingtoniae Dearness & House, sp. nov.

Spots forming grayish, irregular areas from 1 mm to 1.5 cm broad; cuticle becoming more or less detached and where quite separate presenting pale or whitish spots, upon which and around which the pycnidia are numerous; pycnidia brown, thin, often open at the top, 80–140 μ; sporules hyaline, continuous or 1–3–septate, somewhat stouter at one end and marked in most cases by apparently flattened sections, 20–64 by 2.5–3 μ.

On living and languishing leaves of Darlingtonia californica Torrey. Marshfield, Ore. H. D. House, August, 1912. Type in herbarium of New York State Museum.

Septoria erythraeae Dearness & House, sp. nov.

Spots ill defined, somewhat pallid areas over the whole leaf and along the stems, the punctation of the numerous pycnidia rendering the affected area more obvious on most leaves than the discoloration; pycnidia numerous, scattered, visible from both surfaces of the leaf, more numerous above than below, brown, subconic, small, 30–75 μ in diameter, mostly between 50 and 60 μ; sporules straight, continuous, hyaline, 15–30 μ, but mostly about 25 by 1–1.5 μ.

On leaves and petioles of Erythraea macrantha H. & A. on mountains near Chapala, Jalisco, Mexico. C. G. Pringle, *no. 2422*, December 16, 1889. Type in herbarium of New York State Museum.

Septoria tinctoria Dearness & House, sp. nov.

Spots brownish-red, circular, mostly about 1 cm in diameter, similar but paler beneath, having a white central area 2–4 mm in diameter with a distinct, sharply-raised, black border; pycnidia strictly epiphyllous, 1–12, scattered on the white central area, semiimmersed, black with a paler center, 80–100 μ; sporules hyaline, curved, cylindric, 2–4-septate, 25–48 by 2.5–3 μ.

On living leaves of Symplocos tinctoria L'Her. Prescott, Ark. G. W. Letterman, August, 1892. Type in herbarium of New York State Museum.

Septoria stigma B. & C., on this host, has short sporules 15 μ; and Septoria symploci Ell. & Mart. has hypophyllous perithecia and cylindric-clavate sporules.

Phyllosticta raui (Peck) Dearness & House

Sphaeropsis raui Peck. Bot. Gaz. 3: 34. 1878. Phoma raui Sacc. Syll. 3: 143. 1884. Macrophoma raui Berl. & Vogl. in Atti Soc. Veneto-Trentina p. 181. 1886.

Examination of the type material collected in Colorado on Artemisia scopulorum, by Brandegee, and communicated to Doctor Peck by E. A. Rau, shows that it properly belongs in the genus Phyllosticta.

Peridermium cerebrum Peck

An interesting form of this species occurs upon Pinus chihuahuana in Arizona, and causing an abortion of the cones as shown in the accompanying plate. The specimen from which this illustration was taken was collected near Canille, Ariz., by Mr William T. Doherty, July 12, 1914.

Specimens of Peridermium carebrum hitherto collected in this country have been caulicolous, producing enlargements of woody stems. This appears to be, so far as I can learn, the first collection of the species on cones. It will doubtless prove to be a different species when its telial stage (some species of Cronartium) becomes known. The dehiscence of the aecia is quite charactertistic,

Peridermium cerebrum Peck, causing abortion of cone on Pinus chihuahuana

resembling Peridermium filamentosum, but lacking the usual filaments which run up through the mass of spores in that species. In P. cerebrum the upper part of the peridia usually flakes off in scales, which is quite unlike the way this specimen appears to behave, the peridia of which stand up prominently and are beautifully fringed. The spores exceed in length the measurements given for either of these species.

Melanopsamma waghornei House, nom. nov.

Melanopsamma borealis E. & E. Proc. Phil. Acad. Nat. Sci. 1893. p. 445. Sacc. Syll. XI: 305. Type collected in Newfoundland by Waghorne.

The host plant is not given, but the specimen in the herbarium of the New York State Museum, a cotype, appears to be upon Populus. The name proposed for it by Ellis and Everhart is antedated by Melanopsamma borealis (Karst.) Sacc. Mich. 1: 347; Sacc. Syll. 1: 578.

Ramularia delphinii Dearness & House, n. sp.

Spots arid, circular to oblong, extending between the veins 3 to 5 mm, bounded by a raised dark brown border, paler above but otherwise alike on both sides of the leaf: tufts of fertile hyphae prominent, hypophyllous, 15–30 by 2½–3 μ, bearing continuous conidia 15–33 by 4–5 μ.

On leaves of Delphinium scopulorum Gray. Collected by Charles S. Sheldon, El Paso county, Colorado. August 10, 1892. Type in herbarium of New York State Museum.

WESTERN PLANTS INTRODUCED AT ROCHESTER

BY HOMER D. HOUSE

Among some specimens received for identification from Prof. M. S. Baxter, of Rochester, was found a grass which was determined as Stipa comata Trin. & Rupr., known in the west as porcupine or blow-out grass. Its natural range is from Iowa to Texas, California and Yukon. It is an interesting addition to the already long list of western plants which have become established in the vicinity of the Cobb's hill reservoir at Rochester and collected there by Mr Baxter and by Miss Beckwith.

With the cutting away of the forests of the east and the gradual drying up of a large portion of the soil, the tide of weed migration from European countries has been met by a countermigration of western species, which are largely adapted to dry situations, into the fields and waste places of the eastern states.

Following the construction of the Cobb's hill reservoir at Rochester, a rather notable establishment of western species took place. This may be partly explained by the use of western hay or grain for the animals used in the work, if such was the case. In the absence of evidence regarding the means by which the seeds of these western species reached Cobb's hill, and the fact that few of them have been reported from other eastern localities would seem to indicate that the seeds reached there in either hay or grain.

During the summers of 1910 to 1914, a large number of these western emigrants were collected there by Prof. M. S. Baxter and by Miss Florence Beckwith. The list of them which follows includes only those deposited in the State herbarium.

Artemisia carruthi *Wood*
" biennis *Willd.*
" dracunculoides *Pursh*
" frigida *Willd.*
" glauca *Pall.*
" trifida *Nutt.*
Anogra albicaulis (*Pursh*) *Britton*
Allionia hirsuta *Pursh*
Aster multifolius *Ait.*
Chaenactis stevioides *Hook. & Arn.*
Bidens tenuisecta *A. Gray*
Chrysothamnus pinifolius *Greene*
Boebera papposa (*Vent.*) *Rydb.*
(Drysodia papposa (*Vent.*) *Hitchc.*)
Grindelia squarrosa (*Pursh*) *Dunal*
" squarrosa nuda *A. Gray*
Gaura coccinea *Pursh*
Gymnolomia multiflora (*Nutt.*) *Benth. & Hook.*
Helianthus petiolaris *Nutt.*
Lappula echinata *Gilibert*
Lygodesmia exigua *A. Gray*
Machaeranthera pulverulenta (*Nutt.*) *Greene*
" tanacetifolia (*H. B. K.*) *Nees*
Monolepis nuttalliana (*R. & S.*) *Greene*
Salsola pestifer *A. Nelson*
Sideranthus gracilis (*Nutt.*) *Rydb.*
Verbena bracteosa *Michx.*
Stipa comata *Trin. & Rupr.*

Most of these species have been observed for from two to four years, and it is an interesting conjecture as to whether they will become permanent members of our flora or soon disappear. Some of them are already well established in many localities, such as Salsola pestifer, Verbena bracteosa and Grandelia squarrosa, which are fast becoming obnoxious weeds in many places.

NOTES UPON LOCAL FLORAS

BY HOMER D. HOUSE

1 FULTON COUNTY

Orontium aquaticum Linn.

Collected near Broadalbin in June 1884, by J. D. Greenslete. The specimen is preserved in the State herbarium and Messrs A. Olsson and C. P. Alexander, who have collected extensively in this section within the past few years, have failed to rediscover this species. The Fulton county record of this species is interesting because the species is credited in this State usually only to the southern counties, the specimens in the State herbarium being from southern Chenango county, Sullivan, Orange, Richmond and Suffolk counties.

Trillium cernuum Linn.

Rich, moist soil in thickets and thin woods, near Northampton. H. D. House, May 27, 1914. *No. 5424.*

Viola lanceolata Linn.

Moist meadows, near Northampton. H. D. House, May 27, 1914. *No. 5422.*

Viola primulaefolia Linn.

Moist meadows, near Northampton, growing with Viola lanceolata. H. D. House, May 27, 1914. *No. 5421.*

Viola septentrionalis Greene

Open wood and roadsides, near Northampton. H. D. House, May 27, 1914. *No. 5412.*

Viola fimbriatula x septentrionalis Brainerd

Roadsides near Northampton. H. D. House, May 27, 1914. *No. 5415.*

2 HERKIMER COUNTY

Lysimachia vulgaris Linn.

Common and thoroughly naturalized along the banks of West Canada creek from Herkimer up to Poland. Collected at Newport, H. D. House, July 23, 1914. *No. 5688.* The golden or yellow loosestrife seems to have been early introduced in this region as an

ornamental plant and has become naturalized everywhere in the woods and thickets along West Canada creek. Also collected at Herkimer by Dr J. V. Haberer.

Serapias helleborine Linn.

Mohawk river flats near Little Falls. Mrs Loomis Burrell, July 23, 1914. Commonly supposed to be an introduced species from Europe, where it is common. In America it is now known from a number of localities in New York State ranging from Little Falls to Rochester. Its appearance in all these localities is that of a native plant and in the absence of any evidence as to its nonindigenous character should be regarded as a native species.

Cassia marilandica Linn.

Meadows and stream banks, near Newport. H. D. House, July 23, 1914. *No. 5686.*

3 MADISON COUNTY

Geum meyerianum Rydberg

(Geum agrimonioides *C. Meyer,* 1846, not Pursh, 1814)

Related to Geum canandense, but the basal leaves and lower stem leaves are pinnatifid and the stem is more hirsute. These characters are sometimes found in Geum hirsutum Muhl., but the petals in G. meyerianum are white and longer than the sepals, while in G. hirsutum they are pale yellow and much shorter.

Doctor Rydberg reports the species from Fleischmann, Delaware county, and from Orange county, and from Oneida (H. D. House, 1903) Madison county, in addition to which there is a specimen in the State herbarium from Troy, collected by E. C. Howe.

Apargia hispida (Linn.) Willd.

Waste grounds near Oneida, H. D. House, June 9, 1914. *No. 5556.*

Carex abacta Bailey

(C. rostrata *Michx.,* C. michauxiana *Boeckl.*)

Borders of the sphagnum bog known as "Fiddler's green," Pecksport. H. D. House, July 27, 1914. *No. 5761.*

Castanea dentata Borkh

Sandy loam soil in mixed woods, near Kenwood, 2 miles south of Oneida. H. D. House, July 21, 1914. *No. 5685.* The chestnut is not a common tree in central New York as most of the soils either contain too much lime or are derived directly from underlying limestone, a condition which seems to be inimical to the growth of the chestnut. So far as I know this is the only locality for the chestnut in Madison county, although it has been successfully planted in a number of places.

Lonicera oblongifolia (Goldie) Hooker

Peterboro, in a sphagnum bog. H. D. House, June 11, 1914. *No. 5547.*

Smilacina trifolia Linn.

Arbor Vitae swamps around the edge of sphagnum bogs, Peterboro. H. D. House, June 11, 1914. *No. 5550.* Pecksport, June 10, 1914. *No. 5514.*

Kalmia polifolia Wang.

Sphagnum bog, Pecksport. H. D. House, June 10, 1914. *No. 5525.*

Lonicera hirsuta Eaton

Dry thickets along edge of woods near Pecksport. H. D. House, July 27, 1914. *No. 5736.*

Galium labradoricum Wiegand

Sphagnum bogs, Pecksport. H. D. House, June 10, 1914. *No. 5517.* Peterboro, June 11, 1914. *No. 5549.*

Linnaea borealis Linn.

Woods near Pecksport in open places amongst mixed stands of hemlock and hardwoods. H. D. House, June 10, 1914. *No. 5531.* This species, known commonly as the "twin-flower," is fairly abundant throughout the mountainous parts of the State but is scarce or local elsewhere.

Carex pseudo-cyperus Linn.

Swamps near Pecksport. H. D. House, July 27, 1914. *No. 5742.*

Eriophorum callitrix Cham.

Very abundant on the surface of the sphagnum bog known as "Fiddler's green," Pecksport. H. D. House, June 10, 1914. *No. 5524.*

Phyllitis scolopendrium (L.) Newm.

(Scolopendrium vulgare *Sm.*)

In the rich humus, covering the talus of limestone cliffs at Chittenango Falls, under the dense shade of mixed hardwoods and hemlock. H. D. House, June 9, 1914. *No. 5509.*

The species was first discovered at Chittenango Falls by Mr William Cooper about 1830 and remained until 1857 the only American station definitely known, although it was earlier discovered at Geddes, Onondaga county, by Frederick Pursh, on July 20, 1807. For many years it was supposed that Pursh's locality was the Chittenango Falls station until it was rediscovered at the Geddes locality in 1879 by members of the Syracuse Botanical Club. In July 1898, the fern was discovered at Perryville, Madison county, by Miss Murray Ledyard of Cazenovia.

A full and interesting history of the occurrence of this rare fern in America is given by Mr William R. Maxon in Fernwort Papers, pages 30–46, December 20, 1909.

Batrachium trichophyllum (Chaix.) F. Schultz

(Ranunculus aquatilis var. trichophyllum (*Chaix.*) A. Gray

In slow streams, near Pecksport. H. D. House, July 27, 1914. *No. 5737.*

Azalea nudiflora Linn.

In open woods along the edge of a swamp near Pecksport. H. D. House, June 10, 1914. *No. 5523.*

Coronilla varia Linn.

Common along roadsides between Clockville and Peterboro. A native of Europe and frequently introduced and escaped either by cultivation or by introduction with grain and grass seed. Commonly known as axseed or axwort.

Viola incognita Brainerd

Rich, rocky woodlands, Chittenango Falls. H. D. House, June 9, 1914. *No. 5507.* This long-neglected violet proves to be one of

the commonest species of the genus in rich, moist woodlands, while Viola pallens (V. blanda Auth. not Ait.) with which it was long associated, is confined to sphagnum or mossy swamps.

Viola incognita var. forbsii Brainerd

Rich, moist woods, near Pecksport. H. D. House, June 10, 1914. *No. 5520.*

Rhodiola rosea Linn.

(Sedum roseum *Scop.*, Sedum rhodiola *DC.*)

Limestone cliffs at Chittenango Falls. H. D. House, July 26, 1914. *No. 5730.* First collected here several years ago and determined by Dr B. L. Robinson. The colony of plants consists of less than a dozen individuals, tightly wedged in an almost inaccessible crevice of the cliff. The range of the species is chiefly subarctic, from Labrador to Maine and Vermont and northern Europe. The State herbarium contains in addition a specimen collected on the cliffs of the west side of Seneca lake, many years ago by Samuel H. Wright M. D., and which has seemingly passed unquestioned as Sedum telephioides Michx., which it was labeled. The fruit character, however, consisting of four erect folicles with their tips barely spreading, serves to distinguish it readily from Sedum telephioides, which possesses usually five distinctly spreading folicles. According to the books Rhodiola rosea has also been collected on the cliffs of the Delaware river in eastern Pennsylvania.

4 ONEIDA COUNTY

Agrostis maritima Lam.

(A. coarctata *Ehrh.*, A. alba maritima *G. F. W. Mey.*)

In dry sand along the shore of Oneida lake, Sylvan Beach. Dr J. V. Haberer, *no. 1724*, July 1900. H. D. House, *no. 5615*, June 1914.

Azalea nudiflora Linn.

Sylvan Beach. H. D. House, *no. 5486.* June 8, 1914.

Blephariglottis ciliaris (L.) Rydb.

Sylvan Beach. H. D. House, *no. 5721.* July 24, 1914. The golden-fringed orchid, as this species is commonly known, is rather rare north of the coastal region of the State. It has been collected at North Manlius, Onondaga county, by Dr Hermann Wibbe in 1871,

at Irondequoit, Monroe county, by Rev. L. Holzer in 1867, and is fairly abundant on the pine plains west of Albany, where it was first collected about 1830 by Lewis C. Beck and more recently by Dr Charles H. Peck.

Carex swanii (Fernald) Mackenzie

Sylvan Beach. H. D. House, *no. 5699*. July 24, 1914.

Cenchrus carolinianus Walter

Sandy fields near Fish Creek station, where perhaps introduced. H. D. House, *no. 5832*. August 10, 1914.

Chamaesyce humistrata (Engelm.) Small

Sylvan Beach, in sandy soil. H. D. House, *no. 5641*. July 20, 1914.

Ibidium gracile (Bigel.) House

Common in sandy fields and open woods near Sylvan Beach. H. D. House, *no. 5620*. July 20, 1914.

Lathyrus maritimus (Linn.) Bigelow

Common in sandy grassy places and open sandy woods along the shore of Oneida lake, north of Sylvan Beach. H. D. House, *no. 5608*. July 20, 1914.

Leptasea aizoides (Linn.) Haw.

Cliffs of Fish creek above Taberg, growing with Primula mistassinica, Lobelia kalmii, Parnassia caroliniana and many other moist clift-loving species. H. D. House, *no. 5653*. July 21, 1914.

Lythrium salicaria Linn.

Wet, marshy places along the shore of Oneida lake, near Sylvan Beach. H. D. House, *no. 5613*. July 20, 1914.

Nymphaea rubrodisca (Morong) Greene

Waters of Fish creek near Sylvan Beach. H. D. House, *no. 5634*. July 20, 1914. Said to be a hybrid between N. variegata and N. microphylla, which is quite possible since it is intermediate in appearance and both of the species mentioned are common here.

Its hybrid origin appears to be the more certain since it is not found in places where N. microphylla is absent. This is true of ponds like those in the swamps known as Fiddler's green, near Pecksport, Madison county, where N. variegata is very abundant.

Nyssa sylvatica Marsh.

Low woods near Sylvan Beach. H. D. House, *no. 5457*. June 5, 1914.

Parnassia caroliniana Michx.

Mossy dripping rocks and cliffs along Fish creek above Taberg. H. D. House, *no. 5663*. July 21, 1914.

Plantago aristata Michx.

Sandy roadsides near Sylvan Beach, probably introduced. H. D. House, *no. 5624*. July 20, 1914.

Polygala viridescens Linn.

Sandy fields and roadsides near Sylvan Beach. H. D. House, *no. 5621*. July 20, 1914.

Populus deltoides Marsh.

Low woods about the eastern end of Oneida lake. H. D. House, *no. 5473*. June 5, 1914.

Rhexia virginica Linn.

Very abundant in a low, sandy meadow north of Sylvan Beach. H. D. House, *no. 5611*, July 20, 1914. The species was reported from this locality many years ago by Kneiskern, and it also occurs westward along the northern shore of Oneida lake to Constantia, where it was found by Dr George Vasey. These are the only localities in the State north of the coastal region which are known for the species.

Silene dichotoma Ehrh.

Sandy fields near Fish Creek station and introduced. H. D. House, *no. 5831*, August 10, 1914.

Verbascum lychnitis Linn.

Sylvan Beach. H. D. House, *no. 5616*, July 20, 1914. It is interesting to note what J. A. Paine, jr (Flora of Oneida County, 1865) says of this species.

" Barren sandy fields and copses on a ridge at the head of Oneida lake, parallel with the shore, beyond which are swamps. It is most abundant around the mouth of Fish creek. Here are the ruins of an old fort, which may account for the introduction of the plant. Two hybrids between this species and V. thapsus, one resembling the latter with a simple stem and yellow flowers, and the other the former with paniculate branches and white corollas, were observed by Kneiskern."

The ruins of the fort mentioned have disappeared, but the " white mullin " is still abundant there as are the hybrids mentioned, which may be described as follows:

Verbascum lychnitis x thapsus, hyb. nov.

Flowers pale yellow in long terminal spikes or loosely panicled; leaves somewhat decurrent, stems angled; the two lower filaments of the flowers beardless like V. thapsus, the three upper ones clothed with whitish wool; flowers about 1.5 cm broad.

5 ONONDAGA COUNTY

Mariscus mariscoides (Muhl.) Kuntze

Salt marshes, foot of Onondaga lake. Miss Mary Oliva Rust, September 19, 1883.

Ruppia maritima L. var. **onondagensis** Fernald & Wiegand

Onondaga lake, J. A. Paine, jr, 1864 (in herbarium of New York State Museum), Dr J. V. Haberer, September 1878. The specimens collected by Paine are quite likely duplicates of the type of the variety onondagensis, described by Fernald and Wiegand in Rhodora 16: 126. 1914. The differences between the plants collected by Paine and Haberer and one from Coney island (T. F. Allen, 1864) are so slight, that the plants from Onondaga lake can scarcely be regarded as a distinct variety.

Plantago major Linn. var. **intermedia** (Gilbert) Des.

Salt marshes near Onondaga lake. C. S. Sheldon, July 22, 1880. Also collected at Saranac lake and at Eastport, Long Island, by Peck.

Carex eburnea Boott

Limestone ledges and open places. Green lake near Kirkville. H. D. House, June 6, 1914. *No. 5478.*

6 OSWEGO COUNTY

Carex incomperta Bicknell

(Carex sterilis *Willd.*, in part)

In sphagnum under the shade of tamarack and spruce, "Lily marsh," H. D. House, July 30, 1914. *No. 5797.* New to State herbarium.

Carex howei Mackenzie

(Carex interior capillacea *Bailey*, Carex scirpoides capillacea *Fernald*, Carex delicatula *Fernald*)

Wet shady soil, shore of Lake Ontario, 3 miles east of Oswego. H. D. House, July 29, 1914. *No. 5770.*

Carex exilis Dewey

Sphagnum bog bordering Mud lake, Hannibal. H. D. House, June 27, 1914. *No. 5599.*

Carex limosa Linn.

Sphagnum bog bordering Mud lake, Hannibal. H. D. House, June 27, 1914. *No. 5595.* "Lily Marsh," July 30, 1914. *No. 5796.*

Agalinis paupercula (A. Gray) Britton

(Gerardia paupercula *Britton*)

Mud lake, Hannibal, in the sphagnum bog bordering the lake. C. S. Sheldon.

Utricularia intermedia Hayne

Mud lake, Hannibal. H. D. House, June 27, 1914. *No. 5593.*

Lonicera oblongifolia (Goldie) Hooker

Mud lake, Hannibal. H. D. House, June 27, 1914. *No. 5583.*

Triglochin maritima Linn.

Mud lake, Hannibal. H. D. House, June 27, 1914. *No. 5585.*

Eriophorum alpinum Linn.

Very abundant in the sphagnum bog bordering Mud lake, Hannibal. H. D. House, June 27, 1914. *No. 5591.*

Lepargyraea canadensis (Linn.) Greene

In thickets and open woods on the high bluffs facing Lake Ontario, west of Oswego. H. D. House, June 26, 1914. *No. 5558.*

Lychnis flos-cuculi Linn.

Sheldon's grove, Oswego. H. D. House, June 26, 1914. *No. 5560.*

Hieracium pratense Tausch.

Sheldon's grove, Oswego. H. D. House, June 26, 1914. *No. 5562.* This new addition to the flora of the State is a native of Europe and has already been noted at several places from eastern Quebec to southern New England. It bears a close resemblance to Hieracium florintinum All. but differs in having an elongated, slender rootstock and numerous leafy stolons, while Hieracium florentinum possesses a short, stout rootstock and is not stoloniferous. This new arrival of the "hawk weeds" is already abundant at Sheldon's grove and is spreading vigorously.

Mariscus mariscoides (Muhl.) Kuntze

(Cladium mariscoides *Torrey*)

Shores of Panther lake, H. D. House, August 4, 1914. *No. 5821.* The distribution of this species in central New York is decidedly local, and about the borders of most of the lakes where one would expect to find the species it is entirely lacking. It has been collected at Litchfield, Herkimer county, by Doctor Peck.

Lysias macrophylla (Goldie) House

(Muhlenbergia 1: 127. 1906)

(Habenaria macrophylla *Goldie*)

Moist woods under the shade of pine and hemlock. Panther lake. H. D. House, August 4, 1914. *No. 5819.* This species differs from Lysias orbiculata, chiefly in the greater length of the spur of the flower.

Lycopodium annotinum Linn.

Moist woods under the shade of pine and hemlock. Panther lake. H. D. House, August 4, 1914, *No. 5826.* This locality constitutes one of the few known stations of the State for this species outside of the Adirondack and Catskill mountain regions.

Isotria verticillata (Willd.) Rafinesque

In deep shade under spruce and tamarack bordering "Lily marsh," H. D. House, July 30, 1914, *No. 5804.*

Blephariglottis blephariglottis (Willd.) Rydberg

(Blephariglottis blephariglottis (*Willd.*) *Rydberg*)

Abundant in the open, sunny portions of the sphagnum bog known as "Lily marsh." H. D. House, July 30, 1914, *No. 5792.*

Populus deltoides Marshall

Shore of Lake Ontario, east of Oswego. H. D. House, July 29, 1914, *No. 5778.*

Populus candicans Aiton

Shore of Lake Ontario, east of Oswego. H. D. House, July 29, 1914, *No. 5779.* Large trees growing with Populus deltoides, Populus balsamifera and other hardwoods, appearing native but perhaps adventive. The origin of this species, which is common in cultivation and freely escaping, known popularly as the balm of Gilead, seems never to have been definitely settled, although it has been suggested that it has an Asiatic origin. It was described in 1829 by Desfontaines as Populus ontariensis, and there are numerous references to the species in literature which seems to indicate that the species is native to the Great Lakes region and westward to Montana, where the writer has seen it growing on the shores of Lake McDonald.

Nyssa sylvatica Marshall

Swamps and low woods along the shore of Lake Ontario, about 3 miles east of Oswego. H. D. House, July 29, 1914, *No. 5768.* Abundant and of large size. This is the most northerly locality for the species known in New York State.

Ranunculus obtusiusculus Rafinesque

(Ranunculus alismaefolius *A. Gray*)

(Ranunculus ambigens *S. Wats.*)

In a small marsh about 3 miles east of Oswego. H. D. House, July 30, 1914, *No. 5807.*

Stomoisia cornuta (Michx.) Rafinesque

(Utricularia cornuta *Michx.*)

Very abundant in the open sunny portions of the sphagnum bog known as "Lily marsh." H. D. House, July 30, 1914, *No. 5786.*

Potentilla recta Linn.

Fields and waste places about Oswego. H. D. House, July 29, 1914, *No. 5785.*

Centaurium centaurium (Linn.) W. F. Wight

(Erythraea centaurium *Persoon*)

Roadsides and embankments about Oswego. H. D. House, July 29, 1914, *No. 5771.* Introduced and naturalized about the port of Oswego many years ago (specimen in the Beck herbarium dated August 10, 1830) and spreading in various directions. It has been observed as far south as Fulton and Syracuse and several miles eastward. Possessing none of the obnoxious features of a weed, it forms an interesting addition to our emigrant flora. For many years Oswego was the only known American station for this species, but it is now known from many places throughout the eastern states.

Lathyrus myrtifolius Muhlenberg

Moist thickets near the shore of Lake Ontario, west of Oswego. H. D. House, July 29, 1914, *No. 5783.*

Drosera intermedia Hayne

Very abundant in the open, sunny portions of the sphagnum bog known as "Lily marsh." H. D. House, July 30, 1914, *No. 5788.*

Rhynchospora macrostachya Torrey

Mud lake, Hannibal. Dr Herman Wibbe, September 1877. This specimen occurs in the Sheldon herbarium recently donated to the State Museum, and constitutes an outlying station for a species fairly abundant in the coastal plain region farther south. The only other specimens in the State herbarium from this State were collected at Wading River and Smithtown, Long Island.

NEW YORK SPECIES OF MARASMIUS

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Many species of Marasmius occupy a unique position as the xerophytes among the Agarics. They play an important rôle in the formation of humus, since among the higher fungi they are the first to attack and begin the decomposition of leaves, twigs etc. which fall into situations not moist enough to permit the growth of ordinary humus forming fungi. For example, Marasmius androsaceous (L.) Fr. grows upon dead pine needles upon ledges of rock and other exposed situations where the rain water runs off or dries up quickly, and Marasmius minutus Peck may be found upon dead leaves before they have fallen to the ground. The ability of the dried plants to revive readily when moistened makes it possible for them to take advantage of every moist period, no matter how short, to continue their growth.

Although many species of Marasmius are among the first fungi to begin the decay of plant tissues, very few of them are parasitic, and therefore they play but a small part in causing plant disease. In the tropics a few species as M. sacchari Wakker, and M. plicatus Wakker are known to cause serious rootrot in sugar cane. M. caryophylleus (Schaeff.) Schröt., the common fairy ring mushroom, has been shown to be a weak parasite upon roots and underground stems of grasses. The grass is at first stimulated to produce a more vigorous growth with a darker green color than usual. It may then die thus making it possible, even when the fungus is not visible, to detect its presence in lawns by the bare spots where it has killed the grass.

M. caryophylleus is practically the only species of Marasmius which is commonly used as a food. This species is highly esteemed by many people and is considered equal to any other mushroom for the table. M. alliatus (Schaeff.) Schröt., which has the odor and taste of onions, is said to be used in European countries to flavor other dishes. Several species have a bitter or acrid taste and are considered as poisonous. Some have both a disagreeable odor and taste.

Seventy-one species of Marasmius are known in temperate North America. Fifty-five of these have been described or reported from New York State, the majority of them by the illustrious former State Botanist Dr Charles H. Peck. Seventeen species are considered as common to both Europe and North America. Further

study will probably show that more of our American species are common to both continents. In a few instances where there has been confusion of names, American names have been retained for species which are apparently found in Europe also.

A more complete account of the North American species of Marasmius is to be found in vol. 9, pt. 4 of the North American Flora (1915).

A few species, as M. nigripes (Schw.) Fr. and M. foetidus (Sow.) Fr., are somewhat gelatinous when they are fresh and moist. They have therefore sometimes been considered as belonging to the genus Heliomyces. Since the species of Heliomyces are practically confined to the tropics and the above-named species resemble species of Marasmius more than they resemble the typical species of Heliomyces, they are here retained in the genus Marasmius.

The Fresian system of classification has not been found to be entirely practicable for our species. The general arrangement of the species from the large Collybia-like forms down to the small forms with the tough bristlelike stipe is very similar to the usual arrangement. Rather more attention, however, has been paid to the stipe with respect to its surface, whether rough and hairy or smooth and shining, than to the character of the pileus. At its best any system of classification is more or less artificial. The present arrangement will serve its purpose if it helps the student to identify the species of Marasmius as he finds them.

Maramius Fries
Gen. Hymen 9. 1836

Pileus tough, fleshy to membranous, either continuous with the stipe or of a different texture, surface often sulcate or striate, not zonate, dry, glabrous or rarely minutely tomentose or pruinose, margin involute or straight in young plants, becoming broadly convex, plane or uplifted with the disk elevated or depressed, rarely umbilicate; context more or less tough and dry, sometimes soft fleshy but not brittle, dry plants reviving when moistened; lamellae dry, rather thin, often of unequal length, often interveined, but seldom forking, developing slowly, rarely remaining very narrow, almost veinlike; color varying from white to yellow, reddish or purplish, often changing in dry plants; stipe central, seldom fleshy, tough, horny, stuffed or hollow, often slender or capillary, sometimes solid, glabrous or more or less tomentose, hairy, or strigose;

spores white, smooth (angular in M. nigripes) (Schw.) Fr. elliptic, rarely globose when mature, usually more or less obliquely apiculate, maturing slowly and unequally so that it is often difficult to find mature spores in dried plants. The plants usually grow upon vegetable matter, grass, leaves, twigs, bark, wood etc., but very seldom upon soil.

Key to Species

I Pileus fleshy or subfleshy, 1 cm or more broad; stipe more or less tomentose or hairy, at least below; lamellae free or adnexed. Some large plants with nearly smooth stipe are placed in this section.

Pileus white ..... 34 M. phyllophilus
Pileus not white, sometimes pallid in dried plants
  Plants large, pileus 2 cm or more broad
    Lamellae crowded
      Plants with odor and taste strong of onions
        Spores small ..... 1 M. polyphyllus
        Spores 12–14 μ long..... 2 M. prasiosmus
      Plants with neither odor nor taste of onions
        Stipe smooth above..... 6 M. fasciatus
        Stipe more or less tomentose throughout
          Lamellae free, remote; stipe enlarged at the apex..... 3 M. confluens
          Lamellae adnexed; stipe not enlarged at the apex
            Stipe long and twisted; pileus usually pallescent..... 4 M. archiropus
            Stipe not long and twisted; pileus brown ..... 5 M. multifolius
    Lamellae not crowded
      Taste strong and acrid; lamellae usually becoming reddish
        Pileus purple..... 9 M. iocephalus
        Pileus not purple
          Lamellae broad..... 7 M. peronatus
          Lamellae narrow
            Stipe long..... 8 M. subnudus
            Stipe short..... 10 M. rubrophyllus
      Taste neither strong nor acrid
        Lamellae free, usually growing in lawns or grassy places..... 11 M. caryophylleus
        Lamellae adnexed, growing in woods
          Stipe spongy, thickened at base..... 12 M. spongiosus

Stipe short, neither spongy nor thickened at base
Lamellae not dark in dry plants.. 13 M. dichrous
Lamellae becoming brown or reddish ..... 10 M. rubrophyllus
Plants smaller, pileus rarely 2 cm broad
Stipe white or entirely covered with a white tomentum..... 39 M. olneyi
Stipe not entirely white or covered with a white tomentum
Pileus umbonate..... 16 M. umbonatus
Pileus not umbonate
Odor or taste strong or disagreeable
Lamellae annulate-adnexed; pileus umbilicate and striate..... 14 M. foetidus
Lamellae not annulate-adnexed; pileus not umbilicate; odor of onions ..... 2 M. prasiosmus
Odor or taste neither strong nor disagreeable
Stipe slender, long-radicating; pileus red ..... 15 M. elongatipes
Plants not as above
Stipe strigose-tomentose, at least in the lower part
Pileus striate or plicate
Stipe nearly smooth and dark above ..... 17 M. semihirtipes
Stipe white-pubsecent above. 18 M. biformis
Pileus smooth, not striate .
Some of the lamellae subdecurrent, darker in dry plants 19 M. contrarius
Lamellae not decurrent, usually pallescent
Stipe glabrous above..... 17 M. semihirtipes
Stipe not glabrous above
Lamellae rather broad, adnexed ..... 12 M. spongiosus
Lamellae narrow, adnate. 20 M. velutipes
Stipe not strigose-tomentose
Margin of pileus little, if at all, striate
Stipe thickened upward; base tuberculose ..... 13 M. dichrous
Stipe neither thickened upward, nor tuberculose
Stipe long..... 8 M. subnudus
Stipe short..... 10 M. rubrophyllus
Margin of pileus striate or plicate
Stipe long, even..... 8 M. subnudus
Stipe short, thickened upward 13 M. dichrous

II Pileus subfleshy to membranous; stipe smooth pruinose, or subtomentose; lamellae squarely adnate or decurrent, free in a few small plants with tomentose stipe
Pileus white
Lamellae decurrent
Pileus papillate
Spores 10 μ or more long..... 21 M. magnisporus
Spores less than 10 μ long
Lamellae close..... 27 M. papillatus
Lamellae distant..... 22 M. languidus
Pileus not papillate
Lamellae broad
Stipe bulbous; growing upon soil and buried twigs; spores 7–9 μ long.... 23 M. vialis
Stipe increasing upward; growing upon wood or other vegetable debris; spores 10–12 μ long..... 21 M. magnisporus
Lamellae narrow
Lamellae and stipe with minute resinous particles or hairs..... 24 M. resinosus
Lamellae and stipe without resinous particles or hairs..... 25 M. salignus
Lamellae not decurrent
Cystidia present..... 29 M. squamula
Cystidia absent
Spores irregularly angular..... 26 M. nigripes
Spores not angular
Odor strong..... 28 M. perforans
Odor not strong
Stipe hollow, base swollen above and contracted to a point below..... 31 M. praeacutus
Stipe of uniform thickness
Stipe very short, upon herbaceous plants in swamps..... 30 M. caricicola
Stipe not very short
Pileus not distinctly striate or plicate
Stipe pallid..... 32 M. opacus
Stipe becoming reddish..... 33 M. ramulinus
Pileus distinctly striate or plicate
Lamellae narrow, adnexed.. 34 M. phyllophilus
Lamellae broadly adnate..... 35 M. insititius
Pileus not white
Lamellae decurrent
Pileus yellow to ferruginous..... 36 M. tomentosipes
Pileus not yellow or ferruginous
Stipe glabrous above..... 37 M. alienus

Stipe not glabrous above..... 19 M. contrarius
Lamellae not decurrent
Pileus small, 2mm or less broad
Plant minute, pubescent..... 43 M. minutissimus
Plant not pubescent
Pileus smoky-brown, smooth..... 41 M. concinnus
Pileus pale straw color, striate..... 42 M. cucullatus
Pileus more than 2 mm broad
Stipe beset with white or tawny hairs... 15 M. elongatipes
Stipe not beset with hairs
Stipe brown or blackish..... 35 M. insititius
Stipe not brown or blackish
Stipe glabrous; pileus reddish-brown ..... 38 M. leptopus
Stipe farinaceous or subtomentose
Pileus white with a reddish disk
Stipe contracted to a point below ..... 31 M. praeacutus
Stipe not contracted to a point below ..... 40 M. ramealis
Pileus rufescent..... 39 M. olneyi
Pileus pale-yellowish-brown then whitish, plicate-striate..... 35 M. insititius

III Pileus usually membranous; stipe smooth and shining except in a few small plants with a pileus less than 5 mm broad
Plants small; pileus usually less than 3 mm broad
Pileus white
1–2 mm board, smooth..... 44 M. filopes
Small, less than 1 mm; hairy under a lens. 43 M. minutissimus
Pileus not white
Stipe pale straw colored..... 42 M. cucullatus
Stipe neither yellow nor straw colored
Stipe blackish brown, shining..... 45 M. minutus
Stipe pallid, brownish below
Cystidia present..... 46 M. pirinus
Cystidia absent..... 47 M. thujinus
Stipe white..... 41 M. concinnus
Plants larger; pileus usually over 3 mm broad
Pileus fleshy or subfleshy
Plants with odor of onions..... 48 M. alliatus
Plants without odor of onions
Pileus white or light yellow
Stipe brown, mycelioid; cystidia present ..... 50 M. delectans
Stipe reddish brown, not mycelioid; cystidia absent..... 49 M. calopus
Pileus not white or light yellow
Cystidia present; lamellae broad..... 51 M. glabellus
Cystidia absent..... 52 M. bellipes

Pileus membranous
  Pileus white
    Lamellae attached to a free collar..... 53 M. rotula
    Lamellae not attached to a free collar
      Stipe black, paler at apex..... 56 M. albiceps
      Stipe pale, straw colored..... 57 M. straminipes
  Pileus not white
    Lamellae attached to a free collar
      Pileus alutaceous to umber, umbilicate 54 M. capillaris
      Pileus reddish white, umbonate..... 55 M. graminum
    Lamellae not attached to a free collar
      Pileus ochraceous, ochraceous-red, or brown
        Cystidia present..... 51 M. glabellus
        Cystidia absent..... 58 M. siccus
      Pileus not colored as above
        Lamellae purplish gray..... 61 M. melanopus
        Lamellae not purplish gray
          Pileus campanulate, maroon or vinous red..... 59 M. pulcheripes
          Pileus convex to plane or depressed
            Pileus red-brown or vinous red. 45 M. minutus
            Pileus fuscous, pinkish, or rarely whitish..... 60 M. androsaceous

1 **Marasmius polyphyllus** Peck

Ann. Rep't N. Y. State Mus., 51: 286. 1898.

Pileus fleshy, thin, convex or nearly plane, gregarious or cespitose, 2.5–5 cm broad; surface smooth, whitish to pale reddish brown, disk darker in dried plants; context having the odor and taste of onions; lamellae adnexed or nearly free, very crowded, narrow, white, becoming yellowish in dried plants; spores minute, 5–6 by 3–4 μ; stipe equal, hollow, 4–7 cm long, 2–4 mm thick, reddish brown, covered with a white tomentum which is more abundant toward the base.

Shaded damp ground. Minerva, Essex county. July 1st.

Peck says "the peculiar garliclike flavor of this mushroom remains in the mouth a long time after tasting the flesh. This species is closely related to M. prasiosmus Fr. from which it differs in its larger size, more crowded lamellae and smaller spores." It is interesting to note that Ricken's description of M. prasiosmus (Die Blätter. Deutschl.) differs little from this except in the size of the plant. It has been suggested that M. polyphyllus may be known in Europe as M. prasiosmus.

2 Marasmius prasiosmus Fr.

Epicr. Myc. 376. 1838.

Pileus submembranous, soft, campanulate, convex, expanded, obtuse, gregarious, 2–4 cm broad; surface rugulose-sulcate, glabrous, whitish or yellowish, disk darker; context with a strong odor of onions; lamellae attached, subcrowded, narrow, white; spores white, 12–15 by 3–4 μ; stipe fistulose, pallid, glabrous above, subtomentose and thickened downward, pallid, then rufous or fuscous, 5–8 cm long, 2 mm thick.

Upon old leaves in woods.

3 Marasmius confluens (Pers.) Ricken

Blätter. Deutsch. 72. 1911.

Fries, Epicr. Myc. 88. 1838 (As Collybia confluens (Pers.) (Fr.)

Pileus subfleshy, dry, broadly convex to plane, cespitose, 1.5–3.5 cm broad; surface smooth, pinkish brown, becoming yellowish brown or almost white in dry plants; margin thin, often involute even in old, dried plants; lamellae narrow, crowded, free, remote, white or slightly discolored in age; spores 7–8 by 3–3.5 μ; stipe equal, enlarged at the apex, hollow, brown, covered everywhere with dense white tomentum, bases of several plants bound together with dense whitish mycelium, 4–12 cm long, 2–5 mm thick.

Among dead leaves or moss. Common.

This species has generally been considered as a Collybia although it was recognized as having the characteristics of a Marasmius. Peck (Ann. Rep't N. Y. State Mus., 49:61) says "They revive under the influence of moisture and thereby indicate an intimate relationship to the genus Marasmius." Ricken l. c. describes this species as having cystidia which are lacking in our plant.

4 Marasmius archyropus (Pers.) Fr.

Epicr. Myc. 378. 1838.

Piles subfleshy, tough, convex to plane and depressed, gregarious or cespitose by the union of several plants by masses of mycelium at the base, 2–3 cm broad; surface alutaceous, pallascent, often becoming nearly white, glabrous; margin thin, involute, except in the mature plants, even, smooth; context moderately thin, tough, whitish; lamellae white, yellowish when dry, adnexed, crowded, narrow; spores 8 by 4 μ; stipe pale reddish, usually appearing gray

or white with a pruinose or tomentose coat, firm, rigid, stuffed or hollow, 11–14 cm long, 2–3 mm thick.

Among dead leaves in woods. Rather common.

This species is closely related to both M. confluens (Pers.) Ricken and to M. multifolius, Peck. From the former it may be distinguished by its longer, usually twisted stipe which is not enlarged at the apex and by the adnexed lamellae. It is not usually as densely cespitose as M. confluens. From M. multifolius it is distinguished by its longer stipe and the pallescent character of the pileus.

5 Marasmius multifolius Peck

N. Am. Flora, v. 9, pt 4, p. 270, 1915

Pileus subfleshy, tough, convex to plane, 2–3 cm broad; surface smooth, not striate, isabelline to pale fulvous, not fading in dry plants; lamellae narrow, crowded, adnate, white, changing but little in dry plants; spores 6 by 2.5–3 μ; stipe white-villous, firm, stuffed or hollow, 4–6 cm long, 2 mm thick.

Upon dead leaves in woods. Not common.

This seems to be a fairly distinct species which Peck collected several times and which he was apparently ready to publish as a new species. It differs from M. confluens (Pers.) Ricken in its adnate lamellae and in its not being densely cespitose.

6 Marasmius fasciatus Pennington

Ann. Rep't N. Y. State Mus., 24:76. 1872 (As M. anomalus Peck (not M. anomalus Lasch.).

Pileus subfleshy, tough, broadly convex to nearly plane, often subumbonate, densely cespitose, 2–4 cm broad; surface even, glabrous, reddish to tan, fading nearly to white in dried plants; lamellae rather close, narrow, adnexed, narrowed behind, white, sometimes reddish yellow in dried plants; spores 5–6 by 2.5–3 μ; stipe cartilaginous, even, hollow, smooth above, bound together below by dense white mycelium; reddish to dark red or almost black, 3–6 cm long by 2–3 mm thick.

Upon decayed wood and humus in forest. Not uncommon.

The original description of this plant was made from two rather immature plants. The description given above has been modified to agree with later collections and notes of Peck's. This is very close to European specimens distributed as M. lupuletorum (Weimm) Bres.

7 Marasmius peronatus (Bolt.) Fr.

Epicr. Myc. 375. 1838.

Pileus subfleshy, tough, broadly convex, sometimes subumbonate, 2–6 cm broad, surface rich brown with a reddish tint in dried plants, glabrous; margin lighter than the disk, smooth, somewhat irregular; context tough, coriaceous, whitish, the taste unpleasant, acrid; lamellae pallid to reddish, close, rather broad, adnexed; spores ovoid, 6–8 by 3–4 μ; stipe flavid to subrufous, equal, often compressed, villous-corticate, personate-strigose at the base.

Upon dead leaves in woods. Rare.

This species, which is often considered as identical with M. urens (Bull.) Fr. and is called M. urens-peronatus in Europe, seems to be very rare in America, although both forms have been rather frequently reported. The American specimens which most closely resemble those of Europe come from California. A few of Peck's collections are near enough to the European plants to pass as M. peronatus. Some of our collections may prove to be M. putillus Fr.

8 Marasmius subnudus (Ellis) Peck

Ann. Rep't N. Y. State Mus., 51:287. 1898.

Pileus subfleshy, thin, tough, flexuous, broadly convex to plane, gregarious or subcespitose, 2–4 cm broad; surface brownish red, dingy bay or russet, smooth, margin even, smooth or subtriate; context thin, tough, white, the taste unpleasant, bitter; lamellae pallid or yellowish, becoming darker in dried plants, narrow, subdistant, slightly adnexed or free, becoming remote in old, dried plants; spores 8–10 by 4.5 μ; stipe reddish brown to nearly black, covered with a dense white tomentum or nearly naked at the apex, slender, firm, equal, solid or stuffed, 4–8 cm long, 2–4 mm thick.

On ground among leaves and other vegetable debris in woods. Common.

This is undoubtedly one of the species that has often been reported as M. peronatus (Bolt.) Fr. or M. urens (Bull.) Fr.

9 Marasmius iocephalus (Berk. & Curt.) Pennington

Ann. Mag. Nat. Hist. II, 12:420. 1815 (Mycena iocephala Berk. & Curt.).

Pileus submembranous to membranous, broadly convex, gregarious or subcespitose, 1.5–4 cm broad; surface striate or sulcate, violet,

bluish gray at times in dried plants; context with a strong odor; lamellae adnate, distant, rather narrow, paler than the pileus; spores 7 by 3.5 μ; stipe attenuate upward, densely tomentose above, strigose below, white or yellowish, 4–5 cm long, 2–4 mm thick.

Upon dead leaves in woods and swamps. South eastern part of the State. Rare.

Peck has called New York specimens of this plant M. peronatus (Bolt) Fr. Ellis called this plant M. carneo-purpurens, but does not, however, seem to have published a description of the species. The purplish pileus and the strigose stipe plainly characterize the plant.

10 **Marasmius rubrophyllus** Pennington

North American Flora, v. 9, pt 4, p. 27. 1915

Pileus subfleshy, tough, broadly convex to nearly plane, often slightly depressed, gregarious, 1–4 cm broad; surface dry, smooth, reddish brown to dark alutaceous; margin even; lamellae adnexed or adnate, moderately close, narrow, reddish, becoming reddish brown in dried plants; spores 7 by 3.5 μ; stipe firm, even, short, reddish brown, uniformly covered with a white down or pruinose coat, 2–3 cm long, 1–2.5 mm thick.

Upon bark or wood, rarely among dead leaves. Rare.

This species has been called M. peronatus (Bolt.) Fr. in some local lists and M. plancus Fr. and M. erythropus (Pers.) Fr. in others.

11 **Marasmius caryophylleus** (Schaeff.) Schröt.

Krypt. Fl. Schles., 3:561. 1889.
Fries, Epicr. Myc. 375. 1838 (As M. oreades (Bolt) Fr.).

Pileus fleshy, tough, convex, plane or subumbonate, 3–5 cm broad; surface white to pale tan or reddish pallescent, glabrous; margin at first involute, smooth, even, sometimes reflexed in age or in dried plants; context somewhat tough, thick at the disk, whitish, the taste pleasant, the odor fragrant; lamellae white, yellowish when dry, broad, distant, free; spores 7–9 by 4–5 μ; stipe pallid, solid, corticate, with a villous, interwoven cuticle, appearing nearly smooth or slightly villous-pubescent, 4–5 cm long, 2–4 mm thick.

Upon lawns and grassy places. Common.

The coming "fairy ring" mushroom is practically the only species of Marasmius that is used for food. It has a wide distribution and is highly esteemed by the mycophagist. It has been shown that it is partially parasitic upon grass, often slowly killing it out in small areas.

12 **Marasmius spongiosus** Berk. & Curt.

Jour. Bot. & Kew Misc. 172. 1849.

Pileus fleshy, broadly convex, obtuse or plane, 1–3 cm broad; surface whitish fuscous, whitish brown, or tan, the center darker; lamellae slightly adnate, subcrowded, moderately broad, whitish; spores 7–9 by 3–4 μ; stipe 5–10 cm long, 2–4 mm thick, furfuraceous-pulverulent to villous, the base thickened, more or less spongy, tawny to dark brown or almost black, often rooting, the rooting portion being 3–5 cm long.

Among leaves and other vegetable debris in woods. Rather common.

There is much variation in size in this species where it is found in different localities. It is possible that two or more species are confused under this name. Since there are all gradations from large to small plants, size alone can scarcely be taken as a basis for distinguishing separate species. The smooth pileus, tawny to dark brown, villous stipe, which is often spongy or rooting at the base, and the light-colored lamellae characterize our plant. M. semisquarrosus Berk. & Cooke does not seem to be distinct. M. spongiosus may possibly be known in Europe as M. erythropus (Pers.) Fr. It is at least very close to M. erythropus (Pers.) Fr. [Ic. Hymen. pl. 174, fig. 2, and Cooke, Brit. Fungi pl. 1123, B(1077.B).]

13 **Marasmius dichrous** Berk. & Curt.

Ann. Mag. Nat. Hist. II, 12:426.

Bul. Buffalo Soc. Nat. Sci., 1:58. 1873 (As Marasmius caespitosus Peck).

Jour. Cinc. Soc. Nat. Hist., 6:192. 1883 (As Marasmius fagineus Morgan).

Pileus subfleshy, convex, at length plane or depressed, 2–4 cm broad, gregarious or cespitose; surface not polished, dry, nearly smooth to rugose-striate, reddish or purplish pallid to alutaceous, becoming brown in dried plants; lamellae adnate, often becoming nearly free, close, narrow in front, often crisped, pale reddish;

spores often guttulate, 8–10 by 4.5–5 μ; stipe short, hollow, thickened upward, the base subtuberculose, reddish pallid, brown or dark reddish brown, pruinose or slightly pubescent at the base, 1–3 cm long, 2 mm thick.

Upon twigs, bark, wood and other vegetable debris in woods. Rather common.

M. dichrous is usually found upon bark or wood. The smoky brown color of the pileus in dried plants and the short stipe with its slightly tuberculose base are generally sufficient to characterize this species.

14 Marasmius foetidus (Sow.) Fr.

Epicr. Myc. 380. 1838.

Ann. Rep't N. Y. State Mus., 55:648. 1889 (As Marasmius acerinus Peck).

Pileus submembranous, soft, convex, then explanate, umbilicate, 10–20 mm broad, surface subpruinose, fulvo-badius or fox-brown, fading in dry plants; margin striate-plicate; at first involute, lax or dropping; context with a strong, disagreeable odor; lamellae annulate-adnexed, not broad, distant, reddish yellow; spores 7–8 by 4 μ; stipe pruinose, base minutely floccose, hollow, spadiceous, darker below, 1–2.5 cm long, 2 mm thick.

Upon dead branches and other vegetable debris in woods.

Rather common, widely distributed in northeastern United States and Canada; also in Europe. Since the disagreeable odor is not marked except in moist or very fresh plants, collections of M. foetidus are frequently referred to other species.

15 Marasmius elongatipes Peck

Bul. Buffalo Soc. Nat. Sci., 4:181. 1883.

Ann. Rep't N. Y. State Mus., 26:66. 1874 (As Marasmius longipes Peck).

Bot. Sur. Neb., 4:20 1806 (As Marasmius hirtipes Clements).

Pileus thin, submembranous, convex, 8–13 mm broad; surface glabrous, finely striate, fulvous-red; lamellae narrow, adnexed, not crowded, white; spores 7–8 by 3.5 μ; stipe equal, long, slender, radicate, hollow, brown or alutaceous, white at apex, pruinose to white-tomentose, often with white hairs, 5–13 cm long, 1 mm thick.

Upon ground among dead leaves in woods. Common.

This species varies especially in respect to the long radicating stem which may appear brownish tomentose or brown with minute

white hairs. Specimens of M. chordalis Fr. from Sweden seem to be very close to M. elongatipes except that the texture of the stipe is more firm in M. elongatipes than in M. chordalis.

16 Marasmius umbonatus Peck

Bul. Buffalo Soc. Nat. Sci., 1:58. 1873.

Pileus thin, tough, expanded, umbonate, gregarious, 13–19 mm broad; surface glabrous, alutaceous, margin smooth or substriate, at first incurved; lamellae interveined, branched in front, reaching the stipe, subdistant, narrow, white; spores 7–8 by 3.5 μ; stipe equal, solid, fulvous above, pallid below, velvety tomentose, 2.5–4 cm long, 1 mm thick.

Among needles of coniferous trees. Not common.

17 Marasmius semihirtipes Peck

Bul. Buffalo Soc. Nat. Sci., 1:57. 1873.

Pileus thin, tough, convex to nearly plane or depressed, 1–2 cm broad; surface glabrous, reddish brown, becoming alutaceous, the disk darker, margin sometimes striate; lamellae slightly adnexed, subdistant, not narrow, white; spores 8–9 by 4.5 μ; stipe equal, even or finely striate, tubular, reddish brown, often nearly black in dry plants, glabrous above, velvety tomentose toward the base, 3–5 cm long, 1–2 mm thick.

Upon ground among dead leaves etc., in woods. Rather common.

Marasmius semihirtipes varies considerably in color and striation of the pileus and in the color and roughness of the stipe.

18 Marasmius biformis Peck

N. Y. State Mus. Bul. 67, p.25. 1903.

N. Y. State Mus. Bul. 105, p.25. 1906) (As Marasmius longistriatus Peck).

Pileus submembranous, thin, campanulate or nearly plane, often becoming umbilicate, gregarious, 8–16 mm broad; surface glabrous, hygrophanous, striatulate when moist, rugose-striate when dry, bay-red or pale chestnut when moist, grayish when dry, lamellae adnate and joined together at the stipe, rather close, not broad, grayish or creamy yellow; spores 5–6 by 3.5 μ; stipe even, slender, brown

when moist, cinereous when dry, densely downy-pubescent, base often tawny, 2.5 cm long, 1 mm thick.

Under coniferous trees. Infrequent.

Peck (N. Y. State Mus. Bul. 67, p. 25. 1903) says: "The species is closely related to M. subnudus, (Ell.) Pk. but the plant is much smaller, the pileus is usually umbilicate and the stem not inserted. The mycelium binds together a mass of dirt and needles which adhere to the base of the stem when the plant is taken from the ground. In some groups nearly all the pilei are campanulate, in others they are nearly plane. This feature is suggestive of the specific name." A comparison of types and descriptions forces one to the conclusion that M. biformis and M. longistriatus are too nearly identical to be regarded as distinct species.

19 Marasmius contrarius Peck

N. Y. State Mus. Bul. 150, p.34. 199.

Pileus submembranous, tough, broadly convex or nearly plane, gregarious, 4–10 mm broad; surface often uneven, glabrous, whitish or white with brown center, becoming grayish or subalutaceous in drying; lamellae adnate or slightly decurrent, subdistant, thin, sometimes branched or irregular, interspaces slightly venose, whitish; spores 7–9 by 4–5 μ; stipe slender, white within, solid, grayish-tawny, downy, tomentose at base, 2–3 cm long, 1–1.5 mm thick.

Damp mossy places under spruce and balsam trees. Not common.

20 Marasmius velutipes Berk. & Curt.

Ann. Mag. Nat. Hist. III, 4:295. 1859.

Pileus submembranous, tough, plane or umbilicate, gregarious, 8–20 mm broad, surface dull chestnut to ochraceous brown, lighter or pallescent at the center, smooth; margin at first involute, thin, even, smooth, often becoming striate; context thin, tough, white or whitish; lamellae white, becoming yellowish, narrow, close, adnate; spores 6.5 by 4–4.5 μ; stipe reddish brown, covered above with whitish tomentum, below with tawny yellow to brown hairs, flexuous, equal or swollen and spongy below, hollow, often rooting, 3–5 cm long, 1–2 mm thick.

Among dead leaves of deciduous trees. Rather common.

21 **Marasmius magnisporus** Murrill

Mycologia 4:166. 1912.
Ann. Rep't N. Y. State Mus., 41:85. 1888 (As M. salignus major Peck).

Pileus thin, tough, convex, at times umbonate, cespitose or closely gregarious, 1–1.5 cm broad; surface glabrous, white to pale isabelline with a pinkish tint; margin sometimes slightly striate; lamellae squarely adnate or decurrent, distant, broad, strongly interveined, inserted, white, entire; spores oblong, 10–12 by 4–6 μ; stipe increasing upward, tough, grayish avellaneous below, paler above, minutely striate, pruinose to glabrous, 1–3 cm long, 2 mm thick.

Upon dead wood. Not common but widely distributed over the temperate parts of North America.

Marasmius magnisporus has probably been reported from many parts of America and possibly from Europe as M. candidus (Bolt.) Fr. and M. languidus (Lasch.) Fr.

22 **Marasmius languidus** (Lasch.) Fries

Epicr. Myc. 379. 1838.

Pileus subfleshy, convex, gibbous or umbilicate, 1–2 cm broad; surface flocculose, white, pallid, margin rugose-sulcate; lamellae adnate-decurrent, interveined, distant, narrow; spores 6 by 4 μ; stipe increased above, stuffed, pallid, brownish below, surface naked, 2.5 cm long, 1–2 mm thick.

Upon dead stems, grass, leaves etc. Rare.

23 **Marasmius vialis** Peck

Ann. Rep't N. Y. State Mus., 51:287. 1898.

Pileus membranous, convex, 4–10 mm broad; surface pruinose, white; lamellae decurrent, distant, arcuate, white, becoming yellow-brown in dried plants; spores 7–9 by 4–4.5 μ; stipe bulbous, short, solid, tough, substance white then brown or black, surface white-pruinose, 12–20 mm long, 1 mm thick.

Upon dead roots and twigs buried in damp ground. Not common.

24 Marasmius resinosus (Peck) Sacc.

Syll., 5:522. 1887.

Ann.. Rep't N. Y. State Mus., 24:88. 1872 (As Marasmius decurrens Peck).

N. Y. State Mus. Bul. 67, p.38. 1903 (As Marasmius resinosus nivens Peck).

N. Y. State Mus. Bul. 94, p.40. 1905 (As Marasmius resinosus candidissimus Peck).

Pileus thin, convex, subcespitose, 8–13 mm broad; surface minutely tomentose, pure white, becoming yellowish when dry; lamellae arcuate-decurrent, interspaces rugose-reticulate, subdistant, narrow, tapering toward each end, white, the edges discolored; spores 6–7 by 4 μ; stipe slender, firm, equal, white, surface minutely tomentose, 2.5–5 cm long, 1 mm thick. The stipe and lamellae are usually dotted with minute, resinous, granular particles.

Upon vegetable debris upon ground. Common.

The pure white color of the pileus is frequently obscured by the substratum within or upon which the plant grows, which sometimes gives it a grayish or brownish appearance.

25 Marasmius salignus Peck

Ann. Rep't N. Y. State Mus., 35:135. 1884.

Pileus submembranous, convex or plane, sometimes subumbilicate, 4–10 mm broad; surface dry, glabrous or subpruinose, white, margin even; lamellae often joined at the base, rarely forking, adnate, subdistant, narrow, white; spores ovoid or subellipsoid, 6–7 by 4 ; stipe slender, stuffed, reddish brown, slightly furfuraceous or pruinose, 1.5–2.5 cm long, 1 mm thick.

Upon the bark of trees. Not common. This species seems to be very closely related to M. candidus (Bolt.) Fr. Some of Peck's collections might well pass for the plant figured by Bolton (Hist. Fung. pl. 39, fig. D.)

26 Marasmius nigripes (Schw.) Fries

Epicr. Myc. 383. 1838.

Pileus membranous, 6–12 mm broad, campanulate, umbonate; surface white, pruinose, pellucid, margin striate; lamellae adnate, broad, white or pallid, becoming dark in dried plants; spores angular, 8–9 μ; stipe insititious, slightly tapering downward, horny, blackish, white-pruinose, becoming brown in dried plants, 3.5–4 cm long, 1–2 mm thick.

Upon leaves, twigs etc., in woods. Rare in New York but common in Ohio and Michigan. Marasmius nigripes is readily distinguished from all other species of Marasmius by its irregularly angular spores.

27 **Marasmius papillatus** Peck

Ann. Rep't N. Y. State Mus., 24:76. 1872.

Pileus submembranous, convex to expanded, papillate, gregarious, 1–2 cm broad; surface obscurely striate, sordid white or gray, sometimes with a pink tint; margin fluted in dry plants; lamellae adnate with slightly decurrent tooth, some decidedly decurrent, crowded, narrow, white or yellowish; spores 8–9 by 3.5 μ; stipe slender, deeply radicating, firm, hollow, concolorous, white-pruinose, 2.5–5 cm long, 1–2 mm thick.

Upon mossy logs in woods. Common in the Adirondack mountains.

28 **Marasmius perforans** (Hoffm.) Fries

Epicr. Myc. 385. 1838.

Pileus submembranous, plane, not umbilicate, 8–12 mm broad; surface rugulose, glabrous, pallid white, margin not striate; context with a stinking odor, not of onions; lamellae adnate, many dimidiate, simple, crowded, whitish; spores 6–8 by 2–4 μ; stipe equal, hollow, brownish black, velvety, 2–3 cm long.

Upon dead leaves of fir; occasionally upon leaves of other kinds. Common.

This plant has been distributed as Marasmius abietis (Batsch.) Fr. The plant which Batsch figures and describes as M. agaricus abietus seems to be another species, possibly M. alliatus (Schaeff.) Schröt.

29 **Marasmius squamula** (Batsch.) Pennington

North American Flora, v.9, pt 4, p. 277. 1915.
Epicr. Myc. 386. 1838 (As Marasmius epiphyllus Fr.).
Ann. Rep't N. Y. State Cab., 23:175. 1872 (As Marasmius subvenosus Peck).

Pileus membranous, plane, at length subumbilicate, 2–10 mm broad; surface plicate, rugose, milk-white, often becoming light brown in age, margin not striate; lamellae adnate, few, rather narrow, often veinlike, distant, venose-connected, white; spores

8–9 by 3 μ; cystidia awl-shaped, 25–30 by 5 μ; stipe equal, inserted, horny, fistulose, brown below, light above, pruinose or very slightly velvety, 2–5 cm long, 5–1 mm thick.

Upon dead herbaceous stems, leaves, twigs etc. Common.

30 Marasmius caricicola Kauff.

North American Flora, v.9, pt 4, p. 277. 1915.
Mich. Geol. Sur. Bul. 1915.

Pileus membranous, somewhat tough, pliant, convex-expended, obtuse, gregarious, 4–8 mm broad; surface broadly sulcate or alveolate, pruinose, pure white; lamellae thick, adnate, very distant, rather broad, pure white; spores 15–18 by 6–6.5 μ; basidia 2-spored or 4-spored; stipe very short, terete, equal, subglabrous, pure white, inserted by a naked base, 2 mm long, .7 mm thick.

Upon stems of sedges in marshes. Not yet reported from New York. It is not unlikely that it may yet be found within the State. It is easily overlooked because of its small size.

31 Marasmius praeacutus Ellis

Torrey Club Bul. 6, p.76. 1876.

Pileus membranous, convex to expanded, subumbilicate, 6–10 mm broad; surface pulverulent, white, the disk red-tinged; margin at first incurved, subsulcate, striate; lamellae adnate, more or less forked, hardly crowded, narrow, white; spores 5–6 by 3 μ; stipe swollen below but contracted to a point at the base, hollow, reddish brown, white at the base, pulverulent, 2.5 cm long, 1 mm thick. In young plants, the swollen part of the stipe constitutes nearly the entire plant.

Upon dead leaves, twigs, and bark in woods. Rare.

The peculiar appearance of the young plants and the marked constriction of the stipe at its base easily distinguish this species.

32 Marasmius opacus Berk. & Curt.

Jour. Bot. & Kew Misc., 1:99. 1849.

Pileus submembranous, convex, often slightly depressed around a central umbo, 5–8 mm broad; surface rugulose, scarcely striate, opaque, pulverulent, white; lamellae adnexed, distant, ventricose; spores 6–7 by 3 μ; stipe institious, elongate, pulverulent, subfurfuraceous, pallid, 2.5–4 cm long, 1 mm thick.

Fallen leaves and branches. Not yet reported from New York. It is not unlikely that it will be found in the southern part of the State, since it occurs in Ohio.

33 **Marasmius ramulinus** Peck

Ann. Rep't N. Y. State Mus., 51:286. 1898.

Pileus very thin, submembranous, broadly convex, subumbilicate, 4–8 mm broad; surface white, margin nearly even to irregularly plicate-striate; lamellae adnate, rather close, white; spores 7–8 by 3.5–4 μ; stipe slender, inserted, whitish, becoming tawny-red, stuffed, minutely downy or pruinose, 12–18 mm long.

Upon dead twigs and herbaceous stems. Rare.

34 **Marasmius phyllophilus** Peck

N. Y. State Mus. Bul. 116, p.26. 1907.

Pileus membranous, convex or nearly plane, gregarious, 8–16 mm broad; surface dry, strongly rugose-striate or rugose-sulcate, whitish with a faint pinkish tint when dry; lamellae adnexed, distant, narrow, rounded behind, whitish, the interspaces venose; spores 5–6 by 3–4 μ; stipe inserted, slender, equal, tough, hollow, white, covered with whitish downy or velvety pubescence, 20–30 mm long, 1 mm thick.

Upon dead leaves. Rare.

35 **Marasmius insititius** Fries

Epicr. Myc. 386. 1838.

Pileus membranous, convex to plane or subumbilicate, 6–12 mm broad; surface not polished, pale yellowish brown, then whitish, margin becoming plicate-sulcate; lamellae unequal, simple, broadly adnate, distant, narrow in front, pallid; spores 4 by 2 μ; stipe inserted, horny, hollow, reddish brown, floccose-furfuraceous, 2–3 cm long, 1 mm thick.

Upon dead leaves and twigs. Not uncommon.

36 **Marasmius tomentosipes** Peck

Torrey Club Bul. 29, p.71. 1902.

Pileus thin, convex, becoming nearly plane, generally umbilicate, gregarious or subcespitose, 1–3.5 cm broad; surface glabrous, widely striate on the margin when moist, golden yellow, brownish

yellow, or ferruginous, often becoming brown with age; lamellae adnate or decurrent, subdistant, thin, arcuate, pale yellow; spores 6–7 by 3–4 μ; stipe tough, elastic, hollow, blackish brown, covered with tawny tomentum which forms minute, meallike patches at the apex and a more or less dense mat at the base, 2–6 cm long, 1–1.5 mm thick.

Upon vegetable mold, often among grass and moss. Not uncommon.

This species has a wide distribution in America as well as in Europe. It seems to have been known in America as M. velutipes (Clements, Crypt Form. Colo. 182) and as M. flammans Cooke (not Berk. 1856) (Rav. Fungi Am. 467). In Europe it seems to be known as M. cauticinalis (Sw.) Fr. or M. cauliciналis. (Not M. Agaricus cauticinalis Bull.) Specimens from Romell in Sweden under the name M. cauticinalis fulvo-bulbilosus seem to be identical with our New York form. Fries says of M. cauticinalis (Epicr. Myc. 1838) that it is very similar to Omphalia campanella. Peck (N. Y. State Mus. Bul. 67) says, "Similar in color to Omphalia campanella, but differing in its more scattered mode of growth, its longer stem sprinkled with tawny mealy particles, and in its less distinctly umbilicate pileus."

37 **Marasmius alienus** Peck

N. Y. State Mus. Bul. 139, p.25. 1910.

Pileus thin, tough, convex, 6–10 mm broad; surface dry, subpruinose, pallid or pale buff; margin thin, straight, striate in dry plants; lamellae subarcuate, slightly decurrent, distant, creamy yellow, becoming brownish; spores 8–10 by 4–5 μ, oblong or narrowly ellipsoid; stipe firm, slender, hollow, pallid, subpruinose, 2.5–5 cm long, .5–1 mm thick.

Upon mossy, prostrate tree trunks. Rare.

38 **Marasmius leptopus** Peck

N. Y. State Mus. Bul. 67, p.25. 1903.

Pileus thin, broadly convex or nearly plane, 6–10 mm broad; surface glabrous, reddish brown; margin obscurely or rugosely striate; lamellae adnate, close, thin, narrow, white; spores oblong or narrowly ellipsoid, 7.5–9 by 3–4 μ; stipe slender, inserted, hollow, whitish or pallid, glabrous, 2.5–4 cm long, 1 mm thick.

Upon dead leaves. Not uncommon.

39 Marasmius olneyi Berk. & Curt.

Ann. Mag. Nat. Hist. III 4:295. 1859.

Pileus membranous, convex, then plane or depressed, 8–10 mm broad; surface glabrous, dull-rufescent, margin striate at first, then radiately rugose; lamellae joined to a collar which may become free, subdistant, white, the edges slightly crenulate; spores 9–11 by 4–5 μ; stipe pulverulent-tomentose, white, 3.5–4 cm long.

Upon dead twigs. Not reported from New York. It is not unlikely that this species will be found within the State, since it has been reported from both Rhode Island and Michigan.

40 Marasmius ramealis (Bull.) Fries

Epicr. Myc. 381. 1838.

Pileus subfleshy, plane or depressed, obtuse, 4–9 mm broad; surface rugulose, opaque, white, disk with a reddish tint, margin not striate; lamellae adnate, connected behind, subdistant, narrow, white; spores ovoid, apiculate, 8–10 by 3–3.5 μ; stipe short, stuffed, white, reddish below, farinaceous, 12–18 mm long, 1 mm thick.

Upon dead twigs and branches in woods. Not common.

41 Marasmius concinnus Ellis & Ev.

Proc. Acad. Nat. Sci. 1893.

Pileus minute, convex, cespitose, 1 mm broad; surface pruinose, smoke-brown; lamellae adnate, subdistant, pruinose, the edges obtuse; spores globose, hyaline, 3 μ; stipe attenuate above, white, hairy strigose below, pruinose-pubescent at the apex, 2 mm long.

Upon dead Euonymus twigs. Known only from New Jersey.

Further observations are needed to determine whether this is a good species or merely a small form of M. ramealis (Bull.) Fr. or other related species.

42 Marasmius cucullatus Ellis

Torrey Club Bul. 6, p.76. 1876.

Pileus thin, campanulate, 1–2 mm broad; surface sulcate-striate, closing around the stipe when dry, pale straw color; lamellae adnate, about 12, of unequal length, paler than the pileus; spores not found; stipe slender, pale straw color, with thin white tomentum at the base, 5–10 mm long.

Upon dead twigs of Vaccinium corymbosum. Reported from New Jersey only.

Further observations and studies are necessary to determine whether this is a distinct species or only an immature form of some other species.

43 **Marasmius minutissimus** Peck

Ann. Rep't N. Y. State Mus., *27*:97. 1878.

Pileus minute, convex or expanded, .5–1 mm broad; surface white, pubescent, with minute, simple or glandular hairs 30 μ long; lamellae few, narrow, often veinlike or almost wanting; spores not found in the type specimens; stipe capillary, minutely pubescent like the pileus, blackish brown below, pellucid white above.

Upon dead leaves. Rare, probably often overlooked on account of its extremely small size. The minute size and gland-tipped hairs characterize this species. After examining the type specimens of M. minutissimus and reading the description of Eomycenella echinocephala Atk. (Bot. Gaz., 34: 37. 1902) one can not help thinking that the two plants are the same species.

44 **Marasmius filopes** Peck

Ann. Rep't N. Y. State Mus., *24*:77. 1872.

Pileus membranous, delicate, convex, subumbilicate, 2 mm broad; surface white, distantly and obscurely striate; lamellae about 6–8, adnexed to a collar, few, distant, white; spores 7–8 by 3 μ; stipe elongate, filiform, flexed, whitish, glabrous, brownish at the base, 2.5–4 cm long.

Upon dead fir needles. Not common.

45 **Marasmius minutus** Peck

Ann. Rep't N. Y. State Mus., *27*:97. 1875.

Pileus membranous, convex, 2–4 mm broad; surface glabrous, reddish brown, sometimes almost vinous red, margin striate-sulcate; lamellae unequal, distant, subvenous, sometimes branched, white; spores 8 by 3.5–4 μ; stipe capillary, blackish brown, glabrous, shining, 2.5 cm long.

Upon dead leaves, especially those of black ash. Not common.

46 **Marasmius pirinus** Ellis

Torrey Club Bul. 8, p.64. 1881.

Pileus membranous, hemispheric, slightly umbilicate, minute, 1–1.5 cm broad; surface sulcate-striate, atomat or spiny under a lens with ovoid, pointed cells, at first pallid, becoming chestnut; lamellae few, distant, white; spores obovoid, 7–8 by 2.5–3 μ; cystidia oblong-fusoid, narrowed to a point above, 12–13 μ long; stipe filiform, pallid above, often striate, 6–7 mm long.

Upon dead leaves of pear trees. Rare.

47 **Marasmius thujinus** Peck

N. Y. State Mus. Bul. 67, p.26. 1903.

Pileus membranous, hemispheric or convex, often subumbilicate, 2–3 mm broad; surface subglabrous, minutely pulverulent-tomentose under a lens, cinereous, tinged with lilac, margin distantly striate; lamellae adnate, few, distant, white; spores ellipsoid, pointed 7–8 by 3–4 μ; stipe capillary, inserted, pallid, dry, pellucid, glabrous, at times slightly brownish or minutely floccose at the base, 12–24 mm long, scarcely thicker than a hair.

Upon dead leaves of Thuja occidentalis. Rare.

48 **Marasmius alliatus** (Schaeff.) Schröt.

Epicr. Myc. 379. 1838 (As Marasmius scorodonius Fries).

Pileus soft, fleshy, soon expanded, 1–2 cm broad; surface at first even and rufous, soon becoming smooth, rugulose, crisped and white; context having a strong odor of onions; lamellae adnate, crisped, white; spores 6–8 by 3–4 μ; stipe firm, horny, hollow, equal or enlarged above, red or reddish brown, glabrous, shining, 2–4 cm long, 1–2 mm thick.

Upon decaying vegetable debris in woods. Common. "Odor of skunk cabbage." Peck. Although the American plant is considered to be the same as the European, there is a constant difference in the character of the stipe. In our form the stipe is much firmer and more rigid than in the European form.

49 **Marasmius calopus** (Pers.) Fries

Epicr. Myc. 379. 1838.

Pileus soft, fleshy, convex to plane or depressed, 8–18 mm broad; surface smooth, becoming rugulose, light yellow or white; lamellae

emarginate-adnexed, thin, white; spores 7 by 4 μ; stipe equal, reddish brown, glabrous, not mycelioid, shining.

Upon dead leaves and grass. Not common. This species seems to differ from M. alliatus (Schaeff.) Schröt. chiefly in the absence of the odor of onions, which is not noticeable in one and very marked in the other.

50 Marasmius delectans Morgan

Jour. Myc. 11:206. 1905.

Pileus subcoriaceous, convex, then expanded and depressed, 1–2 cm broad; surface glabrous, rugulose, white, changing in drying to yellow or pale alutaceous; lamellae emarginate-adnexed, subdistant, slightly venose-connected, moderately broad, unequal, white; spores lance-oblong, 7–9 by 4 μ; stipe long, slender, slightly tapering upward, arising from abundant white mycelium, glabrous, shining brown, white at the apex, 3–5 cm long, 1–1.5 mm thick.

Upon dead leaves of deciduous trees. Not common. Reported as M. calopus (Pers.) Fr.

51 Marasmius glabellus Peck

Ann. Rep't N. Y. State Mus., 26:66. 1874.

Pileus membranous, convex to expended, 6–15 mm broad; surface dark ochraceous, often roughened on the disk, pruinose with cystidia, margin distantly striate; lamellae free, unequal, interveined, distant, broad, ventricose, whitish; spores 9 by 4.5 μ; cystidia pointed, 30–40 μ long; stipe horny, hollow, reddish brown or chestnut, glabrous, shining, white at the apex, equal or thickened and myceloid at the base, 2.5–5 cm long, 1 mm thick.

Upon dead leaves in woods. Not uncommon.

52 Marasmius bellipes Morgan

Jour. Myc. 11:207. 1905.

Pileus thin, subfleshy, campanulate, then expanded, 1.5–2.5 cm broad; surface glabrous, pale pinkish to purplish, margin plicate-sulcate; lamellae approximate, subdistant, moderately broad, equal, white; spores lanceolate, 10–12 by 3–4 μ; stipe long, slender, thicker upward, brown and shining below, purplish at the apex, glabrous, arising from abundant mycelium, 4–6 cm long, 1 mm thick.

Upon dead leaves of deciduous trees. Not uncommon. Reported by Peck as M. glabellus Peck, although the lamellae are narrower not ventricose and cystidia are lacking.

53 **Marasmius rotula** (Scop.) Fries

Epicr. Myc. 385. 1838.

Pileus membranous, convex, umbilicate, gregarious or subcespitose, 3–10 mm broad; surface plicate, not polished, whitish, often light brown in dried plants, disk sometimes darker; lamellae few, broad, distant, joined together behind into a free collar, whitish; spores 6–8 by 3–4 μ; stipe fistulose, horny, smooth, shining, blackish brown, inserted or arising from rhizomorphic strands, 2–5 cm long.

Upon dead leaves, wood and bark in woods. Very common.

54 **Marasmius capillaris** Morgan

Jour. Cinc. Soc. Nat. Hist., 6:194. 1883.

Pileus membranous, convex, umbilicate, 2–5 mm broad; surface plicate–sulcate, very minutely wrinkled, alutaceous to umber, white at the center; lamellae equal, broad, white, attached to a free collar; spores 8–10 by 4–5 μ; stipe capillary, very long, inserted, black, paler at the apex, glabrous, shining, 5–6 cm long.

Upon old leaves and sticks in woods. Not common. This species seems to differ from M. rotula Fr. in its constantly smaller size and brownish pileus with white center.

55 **Marasmius graminum** (Lib.) Berk. & Br.

Berk. Outl. Brit. Fungol. 222. 1860.

Pileus membranous, convex to plane, umbonate, 3–6 mm broad; surface reddish white, becoming darker in dried plants, margin sparingly sulcate; lamellae free with collar, equal, distant, whitish; spores 8–9 by 4–5 μ; stipe capillary, tough, black or pallid at the apex, glabrous, shining.

Upon dead grass. Not uncommon.

It is doubtful if this species is distinct from M. Curreyi Berk. & Br. The only difference in the descriptions of the two species is in the size of the spores, which are given as subglobose 3–4 μ for M. graminum and 9 by 5–6 μ for M. Curreyi. It is very possible that the spore measurements of M. graminum are based upon immature plants.

56 Marasmius albiceps Peck

Ann. Rep't N. Y. State Mus., 43:67. 1890.

Pileus membranous, convex or campanulate, 5 mm broad; surface glabrous, white; lamellae adnate or arcuate-decurrent, distant, broad, white; spores obovoid, 6–7 by 3–4 μ; stipe horny, setiform, black, paler at the apex, glabrous, growing from a brown mycelium, 16–36 mm long.

Upon dead branches in woods. Rare. In older plants the lamellae are strongly decurrent as in Omphalia fibula Fr.

57 Marasmius straminipes Peck

Ann. Rep't N. Y. State Mus., 26:66. 1874.

Pileus membranous, hemispheric or convex, 2.5–8 mm broad; surface glabrous, white, margin striate; lamellae adnexed, distant, unequal, white, yellow in drying; spores 7 by 3.5 μ; stipe horny, filiform, pale straw color, pallid when dry, brownish at the base, glabrous, shining, 2.5–5 cm long.

Upon dead needles of Pinus rigida. Rare.

58 Marasmius siccus (Schw.) Fries

Epicr. Myc. 382. 1838.

Ann. Rep't N. Y. State Cab., 23:126. 1872 (As Marasmius campanulatus Peck).

Bot. Sur. Nebr., 4:20. 1896 (As Marasmius fulviceps Clements).

Syll. Fung., 14:101. 1899 (As Marasmius clementsianus Sacc. & Sydow.).

Pileus membranous, convex or campanulate, solitary or gregarious, 6–15 mm broad; surface dry, glabrous, ochraceous, sometimes pink, rarely gray in dry plants; margin radiate-sulcate; lamellae subfree, narrowed behind, few, distant, broad, white; spores 12–15 by 6–7 μ, sometimes 20 μ long; stipe slender, not capillary, tough, hollow, blackish brown, glabrous, shining, 2.5–5 cm long, 1–2 mm thick.

Upon dead leaves in woods. Very common.

There is some variation in the size and color in different collections of this species. There is, however, less difference between the type specimens of M. campanulatus Pk., M. siccus (Schw.) and M. clementsianus Sacc. and Sydow (M. fulviceps Clements) than there is between different collections of M. campanulatus made by Peck and deposited by him in the New York State Museum. Like many other species of Marasmius, the spores vary in length. It is claimed that mature spores

of this species may elongate considerably as if beginning to germinate before they are shed.

59 **Marasmius pulcheripes** Peck

Ann. Rep't N. Y. State Mus., 24:77. 1872.

Pileus membranous, campanulate, obtuse, 4–8 mm broad; surface distantly striate, dry, glabrous, soft maroon or vinous-red; lamellae free, few, distant, ascending, narrow; spores 12–14 by 4 μ; stipe strict, brownish black, clear red at the apex, glabrous, shining, 2.5–4 cm long, .5 mm thick.

Upon dead leaves and sticks in woods. Not uncommon. This species might be considered as one of the many forms of M. siccus (Schw.) Fr. Its red or purple color and small size are usually sufficient, however, to distinguish it from forms of M. siccus.

60 **Marasmius androsaceus** (L) Fries

Epicr. Myc. 385. 1838.

Pileus membranous, convex, subumbilicate, 3–12 mm broad; surface glabrous, fuscous or often with a pinkish tint, sometimes nearly white, margin striate; lamellae simple, distinct, subdistant, adnate, whitish; spores ovoid-ellipsoid or oblong, 6–9 by 3 μ; stipe horny, contorted and sulcate when dry, hollow, black, glabrous, 2–5 cm long, .5 mm thick.

Upon dead leaves in woods usually under conifers, especially pine. Very common.

Peck (Ann. Rep't N. Y. State Mus., 41:85, 1888) says that the pale form grows upon fallen needles of spruce trees and the one with fuscous pileus upon fallen pine needles.

61 **Marasmius melanopus** Morgan

Jour. Cinc. Soc. Nat. Hist., 18:36. 1895.

Pileus membranous, convex, 4–6 mm broad; surface glabrous, purplish gray, margin not striate; lamellae adnate, subdistant, rather broad, purplish gray; spores obovoid, apiculate, 5–6 by 2.5 μ; stipe slender, hollow, black, shining, smooth, 2–4 cm long.

Upon dead leaves of deciduous trees. Not uncommon.

Closely related to M. androsaceus (Bull.) Fr. from which it may be distinguished by its colored lamellae and pileus without striation. M. melanopus seems to be confined to leaves of deciduous trees while M. androsaceus is usually found upon needles of conifers.

THE FUNGI OF NORTH ELBA

BY C. H. KAUFFMAN

For the purpose of obtaining, for the Cryptogamic herbarium of the University of Michigan, a representative collection of the fungi of the Adirondacks, a trip was planned to the collecting grounds of Doctor Peck at North Elba. The writer was accompanied by Mr E. B. Mains as assistant, and the collecting was done between August 31 and September 21, 1914. We located at the south end of the town of Newman. During the three weeks of our stay the weather was extremely propitious for the growth of fungi. For several weeks before our arrival and during most of the time thereafter, it rained heavily and almost continually. As a result the fungi, especially the Agarics, were to be found in such abundance that we are able to add a large number of records to the already large list of Doctor Peck.[1] The region covered has in a general way a radius of 3 or 4 miles from Newman. This, it should be noted, is a very small part of the territory studied by Doctor Peck.

The most striking characteristic of this region is the abundance of species of Cortinarii. These are, however, largely limited to the subgenera Telamonia, Dermocybe, and Hydrocybe. This is in sharp contrast to the flora of a region of hardwoods like that of southern Michigan, for in the latter area the subgenera Phlegmacium and Myxacium predominate. It may also be worth while to point out that the forests and forest floor and the subalpine conditions of this region are very similar to those about Stockholm and Upsala, Sweden. The species of fungi should then also be very similar in both places. With this in mind, it was not surprising to find a large number, especially of the genus Cortinarius, which the writer had collected in that country.

Mr Mains gave special attention to the Uredinales and Ascomycetes, and those groups have been identified largely by him. We here kindly thank Professor Arthur and Mr C. G. Lloyd for courtesies extended in the examination of some of the rusts and Hymenomycetes.

MYXOMYCETES

EXOSPOREAE

Ceratiomyxa fruticulosa (*Muell.*) *Macbr.* On moist decayed wood. Common.

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[1] Plants of North Elba. Charles H. Peck. N. Y. State Mus. Bul. 28, June 1899.

MYXOGASTRES

PHYSARACEAE

Fuligo violacea *Pers.* On bark of decayed pine wood.
Fuligo ovata (*Schaeff.*) *Macbr.* On decayed wood etc.
Physarum contextum *Pers.* On sticks.
Physarum nephroideum *Rost.* On decayed wood.
Physarum sinuosum (*Bull.*) *Weinm.* On fallen twigs.
Craterium leucocephalum (*Pers.*) *Ditt.* On fallen leaves and twigs.
Leocarpus fragilis (*Dick.*) *Rost.* On moss and decayed debris.

DIDYMIACEAE

Didymium eximium *Pk.* On fallen, decaying leaves.
Didymium melanospermum (*Pers.*) *Macbr.* On rotten log.
Didymium nigripes (*Lk.*) *Fr.* On spruce twig.
Diderma crustaceum *Pk.* On fallen and living leaves.
Diderma testaceum (*Schrad.*) *Pers.* On stem of living plant and dead leaves.
Lepidoderma tigrinum (*Schrad.*) *Rost.* On rotten log.

STEMONITACEAE

Stemonitis fusca (*Roth.*) *Rost.* On moss and decayed log.
Comatricha irregularis *Rex.* On rotting bark.
Diachaea leucopoda (*Bull.*) *Rost.* On moss and sticks.

RETICULARIACEAE

Enteridium splendens *Morg.* On decayed log.

TUBIFERACEAE

Tubifera ferruginosa (*Batsch.*) *Macbr.* On variety of substrata of wood.

CRIBRARIACEAE

Dictydium cancellatum (*Batsch.*) *Macbr.* On decayed log.

LYCOGALACEAE

Lycogala epidendrum (*Buxb.*) *Fr.* On decayed wood.

ARCYRIACEAE

Arcyria cinerea (*Bull.*) *Pers.* On decayed wood.
Arcyria denudata (*L*) *Scheld.* On decayed wood.
Arcyria nutans (*Bull.*) *Grev.* On decayed wood.

TRICHIACEAE

Trichia botrytis *Pers.* On decayed wood.

Trichia varia (*Pers.*) *Rost.* Among moss on wood.

ASCOMYCETES

EXOASCACEAE

Exoascus alnitorguus (*Tul.*) *Sadebeck.* On aments of Alnus incana.

GEOGLOSSACEAE

Mitrula irregularis (*Pk.*) *Durand.* In moist ground under conifers. Very distinct.

Microglossum rufum (*Schw.*) *Underwood.* On moist, mossy conifer woods.

Trichoglossum hirsutum (*Pers.*) *Boud.* Among moss in conifer woods.

Geoglossum glabrum *Pers.* In swamps of conifers.

Spathularia clavata *Sacc.* On mossy ground under conifers. S. rugosa Pk. is considered identical.

Spathularia velutipes *Cke. et Farl.* On mossy ground under conifers.

Leotia lubrica *Pers.* On wet moss under conifers.

Leotia stipitata (*Bosc.*) *Schroet.* On mossy ground under conifers.

Cudonia circinans *Fr.* In wet, mossy places under conifers.

Cudonia lutea (*Pk.*) *Sacc.* In spruce and balsam etc. woods, among fallen leaves.

HELVELLACEAE

Helvella crispa *Fr.* On the ground, in mixed woods of spruce, balsam and birch.

Helvella elastica *Pk.* On the ground and decayed wood in mixed woods.

Helvella infula *Schaeff.* On rotten wood and on the ground, in mixed woods.

PEZIZACEAE

Lachnea coprinaria (*Cke.*) *Sacc.* On cow dung. Placed here because of its reddish disk and the spore size, in which it differs from L. stercorea Fr.

Lachnea hemispherica (*Wigg.*) *Gill.* On decayed wood.

Lachnea scutellata *Gill.* On decaying wood.

Plicaria badia *Fuck'l.* On soil and decayed logs.

Plicaria repanda (*Wahl.*) *Rehm.* On rotten wood.

Humaria fusispora (*Berk.*) *Rehm.* On the ground.

Geopyxis cupularis (*L.*) *Sacc.* Among moss on rotten wood.

Macropodia macropus *Fuck'l.* On sandy ground in mixed woods.

Aleuria rutilans (*Fr.*) *Gill.* On mosses in balsam and tamarack swamp. This species has reticulated spores and hence, as pointed out by Seaver (Iowa Discomycetes), belongs to Aleuria and not to Humaria where it is placed by Rehm. The apothecia were about .5 cm in diameter, except a single one which measured 2 cm across. The spores measure 19–26 by 11–14 microns.

Otidea leporina (*Batsch.*) *Fuck'l.* On the ground under spruce and balsam.

ASCOBOLACEAE

Lasiobolus equinus (*Müll.*) *Karst.* On dung edge of clearing.

Ascophanus lacteus *Phill.* On cow dung.

HELOTIACEAE

Chlorosplenium aeruginascens (*Nyl.*) *Karst.* On decorticated wood.

Chlorosplenium aeruginosum (*Oed.*) *De Not.* On dead wood.

Dasychypha agassizii (*B. & C.*) *Sacc.* On the bark of balsam branches.

Dasychypha wilkommii *Hart.* On tamarack twigs.

Helotium citrinum (*Hed.*) *Fr.* On dead wood.

Helotium epiphyllum (*Pers.*) *Fr.* On fallen leaves of poplar.

MOLLISIACEAE

Mollisia cinerea (*Batsch.*) *Karst.* On decayed wood.

Fabraea ranunculi (*Fr.*) *Karst.* On Ranunculus acris. All the spores appeared continuous in this material, hence it could be easily referred to the genus Pseudopeziza.

CENANGIACEAE

Dermatea acericola (*Pk.*) *Rehm.* On bark of dead maple branches.

Tympanis alnea (*Pers.*) *Fr.* On branches of Alnus incana.

Tympanis pinastri *Tul.* On bark of balsam trees. This is probably T. laricina, reported by Peck.

PHACIDIACEAE

Coccomyces coronatus (*Schum.*) *De Not.* On fallen beech leaves.

HYPODERMATACEAE

Lophodermium pinastri (*Schrad.*) *Chev.* On fallen needles of white pine.

HYSTERIACEAE

Glonium lineare (*Fr.*) *De Not.* On birch bark.

Hysterographium mori (*Schw.*) *Rehm.* On decorticated logs.

ERYSIPHACEAE

Microsphaera alni (*D. C.*) *Wint.* On leaves of Viburnum.

Uncinula circinata *Cke. & Pk.* On leaves of maple.

Phyllactinia corylea (*Pers.*) *Karst.* On leaves of alder.

HYPOCREACEAE

Hypomyces aurantius (*Pers.*) *Tul.* On Polystictus versicolor.

Peckiella lateritia (*Fr.*) *Maire.* On species of Russula. Reported by Peck as Hypomyces.

Nectria cinnabarina (*Tul.*) *Fr.* On dead sticks and branches.

Nectria episphaeria (*Tode*) *Fr.* On Ustulina vulgaris. Under the high powers of the microscope the spores of this species are finely warty. This fact seems to have been neglected by authors.

Byssonectria violacea (*Schmidt.*) *Seaver.* On Fuligo ovata. The pale violet perithecia are closely aggregate over the whole surface of the aethalium.

SORDARIACEAE

Podospora amphicornis *Ell.* (sense of Griffiths). On rabbit dung.

SPHAERIACEAE

Lasiosphaeria hispida (*Tode*) *Fuck'l.* On bark of white pine.

Melanomma pulvis-pyrius (*Pers.*) *Fuck'l.* On fallen branches of some deciduous tree.

PLEOSPORACEAE

Leptosphaeria crepini (*Westd.*) *De Not.* On strobili of Lycopodium obscurum var. dendroideum.

DIATRYPACEAE

Diatrype albopruinosa (*Schw.*) *Cke.* On dead maple twigs.

Diatrype platystoma (*Schw.*) *Ell.* On dead maple branches.

Diatrype stigma (*Hoff.*) *De Not.* On dead beech limbs.

Diatrypella betulina *Pk.* On fallen branches of yellow birch.

Diatrypella discoidea *Cke. et Pk.* var. alni Cke. On dead branches of alder.

VALSACEAE

Valsa brevis *Pk.* On bark of fallen balsam branches.

Valsa ceratophora *Tul.* On dead branches of Alnus incana.

MELOGRAMMATACEAE

Valsaria institiva *Ces. et De Not.* On bark of maple.

XYLARIACEAE

Ustulina vulgaris *Tul.* On much decayed logs.

Hypoxylon coccineum *Bull.* On bark of beech.

Hypoxylon effusum *Nke.* On rotten logs.

Hypoxylon fuscum (*Pers.*) *Fr.* On branches of Alnus incana.

Hypoxylon multiforme *Fr.* On bark and branches of yellow birch.

Hypoxylon rubiginosum (*Pers.*) *Fr.* On decaying logs.

Xylaria corniformis *Fr.* On rotten logs.

Xylaria digitata *Grev.* On pine logs. Also var. americana Pk.

FUNGI IMPERFECTI

Phyllosticta saccharina *Ell. et Mont.* On leaves of Acer pennsylvanicum.

Cytospora horrida (*Sacc.*) On dead branches of birch.

Sphaeronemella helvellae *Karst.* On stipe of Helvella infula.

Discosia artocreas (*Tode*) *Fr.* On leaves of poplar.

Stysanus berkeleyi (*Mont.*) *Sacc.* On pore surface of Fomes pinicola.

Polythrincium trifolli *Kze.* On leaves of Trifolium repens.

Cercospora circumscissa *Sacc.* On leaves of Prunus.

Pestalozzia funerea *Desm.* On dead leaves of living arbor vitae tree.

UREDINALES

MELAMPSORACEAE

Chrysomyxa chiogenis *Diet.* On Chiogenes hispidula Only the uredospore stage was found.

Chrysomyxa ledi (*Alb. et Schw.*) *De Bary.* On Ledum groenlandicum. Uredospore stage.

Coleosporium solidaginis (*Schw.*) *Thüm.* On aster. Uredospore stage.

Melampsora biglowii *Thüm.* On leaves of willow. Uredospore stage.

Melampsora medusae *Thüm.* On leaves of Populus tremuloides. Uredospore and Telentospore stage.

Melampsoridium betulae (*Schw.*) *Arth.* On leaves of Ostrya. Uredospore stage.

Pucciniastrum pustulatum (*Pers.*) *Diet.* On leaves of Epilobium angustifolium. Telentospore stage.

Uredinopsis osmundae *Magn.* On Osmunda cinnamomea. Uredospore stage.

Melampsorella caryophyllacearum *Schroet.* Aecidial stage. (Peridermium elatinum K. & S.) abundant on the needles of "witches brooms" which it causes on the balsam fir.

PUCCINIACEAE

Puccinia angustata *Pk.* On Scirpus cyperinus var. pelius. Telentospore stage. On the leaves and leaf-sheaths. *Fide* Arthur.

Puccinia asteris *Duby.* On leaves of asters. Telentospore stage.

Puccinia circaeae *Pers.* On Circaea alpina. Telentospore stage. On the leaves.

Puccinia perminuta *Arth.* On Cinna arundinacea. Telentospore stage. *Fide* Arthur.

Puccinia spreta *Pk.* On Mitella nuda. Telentospore stage.

Puccinia uniporula *Orton.* On Carex arctata and debilis var. rudgei. Telentaspore stage. *Fide* Arthur.

Puccinia urticae (*Schw.*) *Lagerh.* On Carex crinita. Telentospore stage. *Fide* Arthur.

Puccinia violae *D.C.* On leaves of violet. Telentospore stage.

Phragmidium albidum *Lagerh.* On leaves of Rubus. Uredospore stage.

TREMELLALES

Hirneola auricula-judae *Berk.* On decaying wood of spruce and balsam.

Pilacre Petersii *B. & C.* On decorticated wood of a prostrate pine tree.

Tremellodon gelatinosum *Fr.* On wet and rotten wood.

Exidia glandulosa *Fr.* On dead branches and sticks of beech, Alnus and other deciduous trees.

Tremella sp. Parasitic on Aleurodiscus amorphus. Except in color, which is whitish, it seems close to T. versicolor Pk.

Tremella mycetophila *Pk.* Parasitic on Collybia dryophila.

Naematelia encephala *Fr.* On decayed wood.

Dacryomyces deliquescens *Fr.* On decayed wood.

Dacryomyces corticoides *E. & E.* On sticks.

Calocera viscosa *Fr.* On the ground under conifers.

THELEPHORACEAE

Thelephora anthocephala *Fr.* On the ground among conifer needles.

Thelephora laciniata *Fr.* Growing interwoven with debris of sticks, conifer needles and humus.

Thelephora palmata *Fr.* On the ground, under balsam and spruce. Known by its strong fetid odor.

Thelephora terrestris *Fr.* Forming large, expanded masses on moss and humus.

Stereum sanguinolentum *Fr.* Resupinate, on spruce logs, bleeding where bruised if fresh, the wounds turning blackish. The resupinate habit, its host, and its testure separate it from S. spadiceum.

Stereum tuberculosum *Fr.* On spruce and hemlock logs and stumps.

Stereum curtisii *Berk.* On dead maple branches.

Hymenochaete avellana *Fr.* On dead branches of maple and other deciduous trees.

Hymenochaete cinnamomea *Fr.* On birch bark.

Hymenochaete ferruginosa *Fr.* On log of deciduous tree.

Hymenochaete tabacina *Fr.* On dead branches of deciduous tree.

Hymenochaete rubiginosa. On sticks.

Peniophora incarnata *Fr.* On dead alder branches.

Peniophora cinerea *Fr.* On maple twigs.

Coniophora puteana *Fr.* On bark of decayed hemlock wood.

Aleurodiscus amorphus *Fr.* On dead branches of the balsam fir; abundant.

HYDNACEAE

Irpex tulipifera *Schw.* On dead branches of Prunus serotina.

Hydnum caput-ursi *Fr.* On trunks and logs of beech.

Hydnum coralloides *Fr.* On beech logs. This species is much more branched than the preceding, but seems to run into it.

Hydnum cyathiforme (*Schaeff.*) *Fr.* Among moss and twigs under conifers.

Hydnum laciniatum *Leers.* On a prostrate beech trunk. The very fine branching is a striking character.

Hydnum repandum *Fr.* On the ground under balsam etc.

Hydnum scrobiculatum *Fr.* On the ground, under conifers.

Hydnum septentrionale *Fr.* On living maple trunks.

Asterodon ferruginosum *Pat.* On much decayed conifer logs. This is referred to by Peck in the North Elba report as A. setiger Pk. He originally named it Hydnochaete setigera Pk. It occurs also in northern Michigan.

Phlebia centrifuga *Karst.* On decaying sticks, probably of spruce.

Phlebia merismoides *Fr.* On coniferous wood.

Phlebia radiata *Fr.* On beech log.

Phlebia strigoso-zonata *Schw.* On wood of Prunus serotina.

Hypochnus vaga *Fr.* On decayed wood of yellow birch. This seems to have a number of synonyms. It was found frequently. When sterile it is bounded by radiating orange-yellow strands, while the developing hymenium becomes a gray-drab color. It was probably referred by Peck to Phlebia vaga.

Grandinia crustosa *Fr.* On decayed wood of balsam. Spores oval, hyaline, 5–6 by 4–5 microns.

Grandinia granulosa *Fr.* On decayed conifer log. The hyphae are dichotomously branched forming irregularly stellate pieces, when crushed under the microscope.

POLYPORACEAE

Boletinus cavipes. On sphagnum and other mosses, under white pine and balsam trees.

Boletinus pictus *Pk.* In conifer woods, especially hemlock.

Boletus chrysenteron *Fr.* In open poplar woods, hillsides.

Boletus clintonianus *Pk.* On sphagnum and other mosses, under spruce and tamarack.

Boletus elbensis *Pk.* On sphagnum and other mosses, under spruce and tamarack. Certainly a distinct species.

Boletus rubritubifer *sp. nov.*

Pileus 2–5 cm broad, fleshy, convex, obtuse, glabrous or obscurely substomentose, dry, even, cinnamonrufous (Ridg.), slightly

variegated with yellowish. Flesh whitish tinged yellow, unchanged, very thick. Tubes pompeian red (Ridg.) throughout; mouths red, depressed around the stem, convex, 5–8 mm long, mouths subangular, 2 to a mm, dissepiments rather thick. Stem 5–6 cm long, 1–2 cm thick above, tapering downward, dingy apricot yellow (Ridg.), concolor within, even, glabrous, solid. Odor and taste mild. Spores subfusiform — cylindrical, hyaline or faintly reddish brown under microscope, 9–12 by 4 μ. On the ground under spruce trees. North Elba, September 10.

Strongly marked by the color of the tube layer which is dark red throughout.

Boletus granulatus *Fr.* On moss, under spruce and pine.

Boletus scaber *Fr.* The specimens are referable to var. alutaceus. Under balsam and spruce.

Boletus subtomentosus *Fr.* On the margin of conifer woods.

Boletus versipelles *Fr.* In mixed woods.

Fomes applanatus *Fr.* On logs and dead trunks of deciduous trees.

Fomes carneus *Nees.* On spruce logs. Usually thinner and more applanate than F. roseus.

Fomes connatus *Fr.* On dead birch wood.

Fomes fomentarius *Fr.* On trunks of living and dead birch trees.

Fomes fraxinophilus *Pk.* On trunk of willow. This is a very unusual host, as this species is almost exclusively found on ash. The young pileus was entirely whitish over the surface and had a distinct fragrant odor.

Fomes igniarius *Fr.* Frequent on standing beech trunks where the fruit bodies become very large. We also found it on a red maple.

Fomes nigricans *Fr.* On trunks of white and yellow birch where it is not infrequent. Known from the preceding by its smoother pileus and different shade of color; the incrustation of the surface of the pileus is very thin.

Fomes pinicola *Fr.* On coniferous wood. Not frequent around Newmans, where hemlock trees are lacking.

Fomes roseus *Fr.* On decaying logs of pine and spruce.

Fomes scutellatus *Schw.* On dead trunks and branches of alder.

Polyporus adustus *Fr.* On dead wood of poplar and other deciduous trees.

Polyporus betulinus *Fr.* On birch; found only on fallen limbs. Rare in this locality.

Polyporus benzoinus *Fr.* On conifer logs.

Polyporus chioneus *Fr.* Common on birch logs and on fallen or dead limbs. P. albellus Pk. is considered the same by some authors. Lloyd says it is not the true P. chioneus of Fries.

Polyporus circinatus *Fr.* Under spruce and balsam, on the ground; sometimes intergrown with Lycopodium among which it may be growing. The pileus is rarely 15 cm broad, more commonly smaller.

Polyporus elegans *Fr.* On decaying logs.

Polyporus galactinus *Berk.* On logs and fallen branches of spruce and on sticks of other wood. This was at first thought to be P. borealis, but that species was not discovered in this locality.

Polyporus gilvus *Fr.* On an alder trunk.

Polyporus glomeratus *Pk.* On log of some deciduous tree. The greenish color when fresh is distinctive. It is at first resupinate and widely spread and when dry may be passed over as a young P. adustus; the greenish color disappears.

Polyporus guttulatus *Pk.* On some conifer logs and a white pine stump.

Polyporus intybaceus *Fr.* On stump of tamarack tree. The spores measure 5–6 by 2–3 microns. The specimen had only three pileoli, each 3–5 inches broad, on an extended, connate stipe about 5 inches long. According to Saccardo it is normally very much branched with numerous pilei.

Polyporus nidulans *Fr.* On wood, probably maple. Infrequent.

Polyporus picipes *Fr.* Common on decaying logs.

Polyporus pubescens *Fr.* Common on birch, willow, alder etc.

Polyporus radiatus *Fr.* On birch; frequent. The pore surface of the fresh plant is mostly smoky gray (Ridg.). Pileus sometimes with a golden yellow margin. P. aureonitens Pat. et Pk. is probably the same, as the colors vary considerably even on the same branch.

Polyporus schweinitzii *Fr.* On white pine and spruce logs and stumps. Frequent.

Polyporus spumeus *Fr.* On ash logs. This white species is reduced to a small size when dried and then becomes dingy yellowish brown.

Polyporus sulphurens *Fr.* On trunks and logs of deciduous trees.

Polyporus weinmanni *Fr.* On decaying conifer logs.

Polystictus hirsutus *Fr.* On dead wood of deciduous trees.

Polystictus perennis *Fr.* In open ground or clearings.

Polystictus velutinus *Fr.* On dead beech limbs. Much like P. pubescens, but thinner, more zonate, not so radiately

wrinkled or so markedly imbricate. It is sometimes subresupinate or reflexed.

Polystictus versicolor *Fr.* On birch and wood of deciduous trees.

Poria attenuata *Pk.* On poplar wood.

Poria betulina (*Murr.*) This is Fomitiporella betulina Murr. of the N. A. F. It was probably referred by Peck to Fomes salicinus Fr. It is frequent on birch. It has much the appearance of Poria inermis.

Poria cinerea *Schw.* On the bark of spruce logs.

Poria ferruginosa *Fr.* On fallen branches of spruce.

Poria medulae-panis *Fr.* On decaying logs of birch and beech.

Poria nitida *Fr.* On wood of some deciduous tree.

Poria prunicola (*Murr.*). This is Fomitiporia prunicola Murr. of the N.A.F. It forms extensive patches on trunks and branches of Prunus serotina.

Poria semitincta *Pk.* On conifer log.

Poria tenuis *Schw.* On decayed wood.

Poria rufa *Schroet.* On fallen trunks of spruce where it forms extensive patches. Hymenium is ochraceous — salmon color to mahogany-red (Ridg.), and of a sticky gelatinous nature when fresh; context pure white; adnate, sometimes slightly reflexed. It was referred here by C. G. Lloyd.

Trametes cinnabarina *Fr.* On dead wood of deciduous trees.

Trametes mollis *Fr.* On conifer logs. This is said to be T. cervinus Pers. It becomes smoky-cinereous in age.

Trametes Pini *Fr.* On spruce logs, often forming extensive resupinate-reflexed sheets. This is the form referred by Peck to T. abietis.

Trametes serialis *Fr.* On under side of conifer logs.

Trametes variiformis *Pk.* On fallen trunk of white pine.

Daedalea confragosa *Fr.* On wood of deciduous trees especially white birch of the locality.

Daedalea unicolor *Fr.* On birch etc. The surface of the fresh pileus is often very pale.

Favolus europaeus *Fr.* Common on dead limbs and fallen branches, sticks etc. F. canadensis seems to be a synonym.

Merulius pulverulentus *Fr.* On decayed wood. The reticulations are composed of grayish white, thick, convolute ridges.

Merulius subaurantiacus *Pk.* On dead wood of the balsam fir.

Merulius tremulosus *Fr.* On birch bark of dead wood.

Lenzites betulina *Fr.* On decayed wood of deciduous trees.

Lenzites sepiaria *Fr.* On dead wood of conifers, often where charred by fire.

Solenia anomola *Fr.* On dead twigs of yellow birch.

CLAVARIACEAE

Clavaria apiculata *Fr.* On decayed wood. These plants were calla-green (Ridg.) toward base, to pale greenish yellow at tips. Spores 9 by 4 microns, yellowish.

Clavaria asperula *Atk.* Under spruce and birch trees, on humus.

Clavaria canaliculata *Fr.* In cedar swamp, among moss and grass.

Clavaria cinerea *Fr.* On humus and much decayed wood, under balsam and pine. The basidia are 2-spored.

Clavaria cristata *Fr.* On the ground in conifer forests. Form *minor,* in sense of Patouillard, also occurs.

Clavaria corrugata *Karst.* On the ground under conifers. Spores 8–9 by 3 microns, slightly yellowish. This has the habit of C. muscoides, but spores are elliptical.

Clavaria flaccida *Fr.* Under conifers, on the ground.

Clavaria flava *Fr.* The form found, growing among conifer needles, may be referred to as forma *carnicolor,* because of its pale flesh color. The habit and spores are those of the species of frondose woods.

Clavaria inequalis *Fr.* Under conifers. This is probably the form C. aurantiaca Pers. The specimens were golden yellow, sometimes with a longitudinal furrow on the sides.

Clavaria ligula *Fr.* Growing on beds of spruce needles.

Clavaria muscoides *Fr.* On mosses, in spruce and balsam forests.

Clavaria platyclada *Pk.* In conifer or mixed woods. This seems to be a form of C. fusiformis Fr.

Clavaria rugosa *Fr.* On black soil of cedar swamp.

Clavaria stricta *Fr.* On logs of beech, etc.

Typhula filicina *Pk.* On stipes and fronds of dead plants of Pteris aquilina. Spores 8–10 by 4–5 microns. Sclerotia pale to white, covered by epidermis of host. Stipe often brownish at base. This is apparently Peck's species, although the sclerotia were not exposed.

Physalacria inflata *Pk.* On rotten log.

AGARICACEAE

LEUCOSPORAE

Amanita flavoconia *Atk.* Under balsam among mosses. A distinct species and easily separated from A. frostiana Pk. by the pulverulent volva. The latter species was not seen at this time.

Amanita muscaria *Fr.* Stems deeply imbedded in Polytrichum moss, under conifers.

Amanita tomentella *Kromb.* Solitary or scattered in conifer woods. Frequent during the month, apparently autumnal. The spores are spherical.

Amanitopsis strangulata *Fr.* Under conifers, balsam and spruce. Its pileus is covered with superficial, mouse-gray scales.

Amanitopsis vaginata *Roze.* On moss and bare ground, mixed woods.

Lepiota acutesquamosa *Fr.* Under conifers. Found but once.

Lepiota amianthina *Fr.* On mosses under balsam, spruce and pine. The colors are duller than given for the European plant, more like those of L. granulosa. The pileus is scarcely ever umbonate and hence approaches L. adnatifolia Pk. The gills are narrowly adnate.

Lepiota cinnabarina *Fr.* In mixed woods of birch and conifers.

Lepiota clypeolaria *Fr.* Under balsam and spruce among debris and humus. The creamy-white variety.

Lepiota cristata *A. & S.* In a hardwood forest.

Lepiota friesii *Lasch.* In mixed woods of birch, beech and spruce. Known by the abundantly forked gills.

Lepiota granosa *Morg.* On prostrate, decaying trunks of deciduous trees. Very distinct from related species.

Lepiota granulosa *Fr.* On mossy ground under conifers.

Lepiota illinita *Fr.* In mixed woods of pine, spruce and birch.

Lepiota procera *Fr.* In a clearing on top of a wooded hill.

Lepiota pulveracea *Pk.* Under balsam in wet swamp. A pale form with creamy-white pileus, adnexed gills and stem squamulose up to the annulus.

Tricholoma flavescens *Pk.* On decayed wood, in a balsam and spruce swamp.

Tricholoma fumosoluteum *Pk.* Among mosses under tamarack and balsam trees.

Tricholoma imbricatum *Fr.* Under conifers. Separated from T. vaccinum by its solid stem.

Tricholoma naucoria *Murr.* On beds of conifer needles. This is T. fallax Pk. Its new specific name is well chosen.

Tricholoma personatum *Fr.* On the ground under leaves. Very infrequent.

Tricholoma resplendens *Fr.* Under hardwood trees.

Tricholoma rutilans *Fr.* On decaying stumps and logs.

Tricholoma subacutum *Pk.* Under conifers, frequent. Its spores measure 6–7 by 4 microns., somewhat smaller than those of the European T. virgatum. The color of the pileus is pearl-gray (Ridg.). It is also closely related to T. acre Pk. and T. murinaceum Bull.

Tricholoma submaculatum *Pk.* On mossy ground under conifers. The stem is subventricose, slightly rooting, usually decumbent. The gills stain yellow.

Tricholoma subrufescens *E. & E.* Under conifers. The plants vary in having shorter stems. This species approaches T. inodermeum Fr., but the gills are close and not broad. It has the habit of a large Inocybe. Color of pileus and stem is clay to cinnamon-buff. (Ridg.). Spores small, subspheroid.

Tricholoma transmutans *Pk.* Under conifers.

Tricholoma viriditinctum *Pk.* Under spruce and balsam. This is the T. virescens of the North Elba Report.

Clitocybe anisearia *Pk.* Among forest debris and humus. Probably to be considered a variety of C. odora Fr. with narrow, crowded gills. Sometimes no green color is present.

Clitocybe candicans *Fr.* In balsam swamp. The satiny, shining-white pileus is characteristic.

Clitocybe clavipes *Fr.* In mixed woods.

Clitocybe cyathiformis *Fr.* On prostrate trunks of white pine, etc.

Clitocybe decora *Fr.* On decaying spruce logs, etc.

Clitocybe diatreta *Fr.* On deep moss, balsam and spruce swamp. The narrow, crowded gills are Tileul-buff (Ridg.) in color.

Clitocybe ditopoda *Fr.* In mixed woods among fallen leaves.

Clitocybe ectypoides *Pk.* On decaying mossy conifer logs.

Clitocybe gilva *Fr.* Under balsam trees, etc., in low ground, deep in the moss. This seems to be a subalpine species which I have not seen elsewhere.

Clitocybe infundibuliformis *Fr.* In mixed woods of birch, beech, and spruce.

Clitocybe laccata *Fr.* Common in low swampy woods, etc.

Clitocybe media *Pk.* Under conifers. Variable and approaching C. clavipes in the shape of the stem.

Clitocybe multiceps *Pk.* On the ground in mixed woods. Much less caespitose than usual in open grassy places.

Clitocybe nebularis *Fr.* In mixed woods.

Clitocybe piceina *Pk.* Under conifers and birch. A toughish plant with gills decurrent on the stem in raised lines.

Clitocybe robusta *Pk.* In mixed woods of birch, beech and spruce. The gills are vinaceous-buff (Ridg.) when fresh, becoming army-brown (Ridg.) after being dried. The pileus varies from the thick and firm condition of the type.

Clitocybe sinopica *Fr.* On charred soil in woods.

Collybia albiflavida (*Pk.*). On the ground among decaying forest debris. The character of the stem-cortex is more like Collybia than Tricholoma.

Collybia butyracea *Fr.* Under cedar, balsam and pine. The typical form.

Collybia confluens *Fr.* Among fallen leaves.

Collybia distorta *Fr.* Subcaespitose on conifer stump. The distinguishing characters are the narrow, crowded gills which soon become rufescent-spotted, the compressed subsulcate stem and the chestnut-brown pileus soon fading to cinnamon. Spores 3–4 by 2 microns. Cystidia none.

Collybia dryophila *Fr.* Under white pine and spruce. A variety occurs with stem colored Mars-yellow (Ridg.).

Collybia familia *Pk.* On mossy logs, cedar and hemlock swamps.

Collybia maculata *A. & S.* Under pine and balsam.

Collybia stridula *Fr.* Low ground under conifers.

Collybia stipitaria *Fr.* On needles of spruce.

Collybia succosa *Pk.* On decaying wood.

Collybia tuberosa *Fr.* On decayed debris including fungous remains.

Mycena clavicularis *Fr.* On beds of pine needles.

Mycena epipterygia *Fr.* On mossy logs.

Mycena galericulata *Fr.* On decayed wood in cedar swamp. Not noticed elsewhere.

Mycena haematopoda *Fr.* On mossy logs of cedar etc.

Mycena immaculata *Pk.* On mosses and humus.

Mycena leaiana *Berk.* On rotten wood.

Mycena pelianthina *Fr.* In mixed woods of beech and spruce, etc.

Mycena pura *Fr.* Among debris in mixed or conifer woods.

Mycena rorida *Fr.* var. On and among pine and spruce needles. These plants depart from the species in the gills being broadly adnate but not decurrent and in the spore size. The spores are elliptic-ovate, 7–9 by 4–5 microns. According to Ricken, the size of the spores are 10–15 by 4–5, cylindric-lanceolate.

Mycena rubromarginata *Fr.* var. Among forest debris under balsam trees. The specimens found were smaller than the typical form and the edge of the gills were fuscous-brown with scarcely a red

tinge. It differs from M. denticulata Pk. and M. purpureofusca Pk. in its large spores which measure 10–12 by 6–7 microns.

Mycena vitilis *Fr.* On moss and black soil in springy places in a cedar swamp. A long-stemmed elegant little species.

Mycena vulgaris *Fr.* In mixed woods among fallen leaves and conifer needles.

Omphalia albidula *Pk.* On debris, under balsam.

Omphalia austini *Pk.* On stump of Arbor vitae. This is a small white species with viscid pileus.

Omphalia campanella *Fr.* On decayed wood of conifers.

Omphalia chrysophylla *Fr.* On decaying prostrate conifer trunks. Somewhat of the habit and colors of Clitocybe decora, but smaller, with more slender cartilaginous stem and spores measuring 10–11 by 4–5 microns.

Omphalia demissa *Fr.*— *Bres.* In balsam and spruce swamp. Distinguished among the small species by the large spores, 10–12 by 6–7 microns. The colors are paler than in the typical form, without any purplish tints.

Omphalia fibula *Fr.* On and among mosses.

Omphalia umbellifera *Fr.* On decayed wood.

Pleurotus albolanatus (*Pk.*). (See Agaricaceae of Michigan.) On much decayed birch logs. Separable from P. porrigens by the spherical spores and the differentiated upper layer of the pileus. From Panus angustatus it is separated by the lack of cystidia.

Pleurotus applicatus *Fr.* On rotten wood of conifer forests.

Pleurotus circinatus *Fr.* On decayed logs in spruce woods.

Pleurotus lignatilis *Fr.* On dead wood of deciduous trees.

Pleurotus mitis *Fr.* On sticks and debris in woods.

Pleurotus porrigens *Fr.* On decayed conifer logs and stumps The margin of the pileus is persistently inrolled.

Pleurotus sapidus *Fr.* On dead trunks and logs.

Pleurotus serotinus *Fr.* On mossy logs in mixed woods.

Pleurotus sulfuroides *Pk.* On conifer logs.

Pleurotus ulmarius *Fr.* On living maple trunks; associated with Panus strigosus B. & C. in one case.

Hygrophorus borealis *Pk.* On moist ground, mixed woods.

Hygrophorus capreolarius *Kalchb.* Under balsam and spruce in and among mosses in which the young plants are often completely sunk. On sphagnum the stems attain a length of 8–10 cm.

Hygrophorus ceraceus *Fr.* On the ground under balsam.

Hygrophorus chlorophanus *Fr.* Low ground in woods.

Hygrophorus conicus *Fr.* Among moss in cedar swamp.

Hygrophorus fuscoalbus *Fr.* Under cedar trees. The typical form.

Hygrophorus miniatus *Fr.* In moist places, swamps; also H. cantherellus Schw., which I consider only a variety.

Hygrophorus peckii *Atk.* On mossy ground, under balsam and spruce.

Hygrophorus pudorinus *Fr.* On mossy ground and among needles of balsam and spruce. This seems to have been referred to H. queletii Bres. by Peck in the North Elba Report. (See also Rep't 42.) But the large size and the coloration are those of H. pudorinus. The subviscid, separable pellicle seems to belong to both species. Ricken says it occurs exclusively in beech forests, but in Michigan this same species occurs also under hemlocks.

Hygrophorus puniceus *Fr.* In mixed woods of birch and spruce.

Hygrophorus speciosus *Pk.* On sphagnum in cedar and tamarack swamp. This seems to be the American form of H. aureus Fr. Two color forms occurred in the same locality: the typical form with the orange-vermilion pileus, and a form with pileus distinctly different in color, that is, light cadmium (Ridg.) in the young as well as in the old stages. The typical form had all the characters of the plant common in the sphagnum bogs of Michigan.

Lactarius affinis *Fr.* In mixed woods of birch and spruce.

Lactarius camphoratus *Fr.* Under balsam and cedar in swamps.

Lactarius cinereus. On much decayed wood in coniferous forests.

Lactarius circellatus *Fr.* In mixed open woods.

Lactarius deceptivus *Pk.* In mixed woods.

Lactarius deliciosus *Fr.* Under balsam and tamarack in swamp.

Lactarius fuliginosus *Fr.* Under spruce.

Lactarius griseus *Pk.* On decayed wood among moss.

Lactarius helvus *Fr.* On moss, conifer swamps.

Lactarius hysginus *Fr.* On wet ground under conifers.

Lactarius lignyotus *Fr.* Under balsam and spruce.

Lactarius oculatus (*Pk.*) *Burling.* On the ground under conifers.

Lactarius pyrogalus *Fr.* In open woods, hillside.

Lactarius rufus *Fr.* Among moss under balsam.

Lactarius subdulcis *Fr.* In moist woods and swamps.

Lactarius theiogalus *Fr.* Under balsam and spruce.

Lactarius torminosus *Fr.* Under conifers.

Lactarius trivialis *Fr.* Under balsam, birch etc.

Lactarius turpis *Fr.* In low ground under conifers. Common; gregarious or subcespitose. This is L. sordidus Pk., but seems too close to the European plant.

Lactarius uvidus *Fr.* In low swampy ground under cedar and balsam.

Russula adusta *Fr.* Under spruce and pine. A single specimen.

Russula delica *Fr.* In sandy soil, under conifers.

Russula emetica *Fr.* Among needles of balsam and spruce in swamps. A form with gills more crowded than is usual in the Michigan plants.

Russula fallax *Cke.* In wet swamps of cedar etc. on sphagnum.

Russula flava *Romell.* In conifer woods.

Russula foetens *Fr.* On the ground in woods.

Russula fragilis *Fr.* In swamps of conifer trees.

Russula paludosa *Britz.* Low ground under conifers. One of the largest Russulae, the stem sometimes attaining a length of 20 cm. It is frequent in similar habitats in Sweden, where Lindblad named it R. elatior.

Russula purpurina *Q. & S.* In cedar swamps.

Russula turci *Bres.* Under balsam trees. The gills are bright ochraceous-yellowish at maturity. The pileus is smoky-brownish with violaceous, greenish or purplish tints with a blackish disk. Taste is mild.

Russula xerampelina *Fr.* In conifer woods.

Cantherellus cibarius *Fr.* Under conifers.

Cantherellus infundibuliformis *Fr.* Among moss in tamarack and spruce swamp.

Cantherellus umbonatus *Fr.* On deep sphagnum and other mosses.

Marasmius androsaceus *Fr.* On fallen balsam needles, twigs etc.

Marasmius capillaris *Morg.* On fallen beech leaves.

Marasmius cohaerens *Fr.* On rotten wood in mixed forests.

Marasmius oreades *Fr.* Roadsides and pastures.

Marasmius prasiosmus *Fr.* On beds of spruce and balsam.

Marasmius rotula *Fr.* On dead wood, roots and stumps.

Marasmius siccus *Schw.* On the ground among fallen leaves in mixed woods of beech, birch and spruce.

Lentinus lepideus *Fr.* On decaying wood of conifers.

Panus stipticus *Fr.* On dead branches of alder etc.

Panus strigosus *B. & C.* On living maple trunks, in one case in company with Pleurotus ulmarius, both growing from the

same wound about 8 feet from the ground. Some refer it to P. laevis B. & C.

Panus rudis *Fr.* On stumps of deciduous trees, usually reported as Lentinus lecontei.

RHODOSPORAE

Pluteus admirabilis *Pk.* On mossy logs in woods.

Pluteus cervinus *Fr.* On stumps of birch etc.

Pluteus granularis *Pk.* On logs in conifer woods.

Pluteus longistriatus *Pk.* On decayed log.

Entoloma griseum *Pk.* Among moss under balsam trees.

Entoloma cyaneum *Pk.* In mixed woods of pine, spruce and birch. The vinaceous color of the typical plant was almost entirely lacking, but the other characters were normal.

Entoloma rhodopolium *Fr.* In open woods of spruce, hillsides.

Entoloma salmoneum *Pk.* On moss and ground in conifer woods.

Entoloma sericatum *Britz.* In mixed woods. This species has the habit and size of E. rhodopolium, but differs in possessing a distinct farinaceous odor and in the narrow gills. The gills are never cinereous. (See Agaricaceae of Michigan.)

Entoloma strictius *Pk.* In swamps, often about base of stumps.

Clitopilus albogriseus *Pk.* In mixed woods.

Clitopilus woodianus *Pk.* In a cedar and birch swamp.

Leptonia asprella *Fr.* In moist places, cedar and birch swamp.

Leptonia formosa *Fr.* Under pine in mosses.

Leptonia grisea *Pk.* In moist places, cedar swamp.

Leptonia lampropoda *Fr.* On mosses under balsam and spruce.

Nolanea conica *Pk.* Among mosses in conifer swamps.

Nolanea fuscogrisellus *Pk.* On mosses under conifers.

Nolanea mammosa *Fr.* In cedar swamp.

Eccilia mordax *Atk.* In frondose woods.

Clandopus nidulans *Fr.* On decayed wood, in birch, beech and spruce forest.

OCHROSPORAE

Paxillus involutus *Fr.* In conifer woods.

Paxillus rhodoxanthus *Schw.* On the ground in open conifer hillsides.

Pholiota adiposa *Fr.* On living beech trunk.

Pholiota aggericola *Pk.* Among debris on the ground in mixed woods. This was formerly called P. indecens and P. aggerata. Pk.

Pholiota caperata *Fr.* Under balsam and spruce.

Pholiota confragosa *Fr.* On decayed logs.

Pholiota limonella *Pk.* On and around the base of yellow birch trunks.

Pholiota marginata *Fr.* On rotten wood.

Pholiota spectabilis *Fr.* On trunk of living yellow birch tree.

Pholiota squarrosoides *Pk.* On trunk of living maple tree.

Pholiota lutea *Pk.* On decaying beech log. Caespitose. It differs from P. spectabilis in its darker mature gills which are chestnut-bay color (Kidg.). The stems become fuscous-ferruginous and are clavate at base. Gills narrow. Flesh etc. yellow. The pileus and stem are not squamose nor distinctly viscid and in this respect differ from P. aurivella Fr. and P. limonella Pk. which are also said to grow on beech. Spores 7–8 by 5–5½ micr.

Hebeloma firmum *Fr.* Under spruce. Spores 10–12 by 5–6 micr.

Hebeloma longicaudum *Fr.* On sphagnum, under balsam and spruce.

Inocybe calamistrata *Fr.* In deep moss under balsam trees.

Inocybe cookei *Bres.* Under balsam trees etc.

Inocybe excoriata *Pk.* In mixed woods.

Inocybe geophylla *Fr.* In cedar swamps etc. on moss.

Inocybe infelix *Pk.* In open places, roadsides etc.

Inocybe nodulospora *Pk.* Under spruce and balsam trees. Spores 7–11 by 6–7 micr. and therefore smaller than those of I. lanuginosa (Fr.) Bres. which are said to measure 11–15 by 8–9 micr.

Inocybe subochracea *Burt.* In moist places in woods.

Inocybe umboninota *Pk.* In woods.

Inocybe violacea *Fr.* On the ground under conifer trees. Always distinct and constant.

Flammula alnicola *Fr.* On decayed wood; in swamps.

Flammula mixta *Fr.* Among mosses on the ground, under conifers. Known by its large spores, measuring 10–13 by 6–7 micr.

Flammula sapinea *Fr.* On decayed spruce logs.

Flammula spumosa *Fr.* On sticks etc. in swamps.

Naucoria semiorbicularis *Fr.* Roadsides and fields.

Naucoria temulenta *Fr.* On black soil in conifer swamps.

Galera hypnorum *Fr.* On mosses.

Galera sphagnorum *Fr.* On sphagnum.

Crepidotus versutus *Fr.* On decayed wood.

Cortinarius alboviolaceus *Fr.* Among debris of forests, under conifers and birch.

Cortinarius alutaceofulvus *Britz.* On wet, mossy ground in mixed woods. This is a segregate of C. bivelus Fr. from which it differs by its spheroid spores which measure 6–6½ by 5–6 microns.

Cortinarius anomalus *Fr.* On the ground in hemlock woods.

Cortinarius annulatus *Pk.* In mixed woods of spruce and birch.

Cortinarius armeniacus *Fr.* Among moss under spruce etc.

Cortinarius armillatus *Fr.* In hemlock and beech woods.

Cortinarius catskillensis *Pk.* Under hemlock and beech.

Cortinarius chrysolitus *sp. nov.*

Pileus 1.5–4 cm broad, convex then plane, light brownish olive to buffy citrine (Ridg.), unicolorous, densely innately fibrillose-hairy, even, opaque, margin at first incurved then decurved. Flesh concolor, thin on margin. Gills at first chrysolite green (Ridg.), then yellowish cinnamon, adnate, emarginate, rather broad, close, thickish, entire on edge. Stem 7–10 cm long, 3–5 mm thick, slender, equal, stuffed then hollow, brownish olive, concolor within, fibrillose, mycelioid at base and attached to sphagnum. Cortina olivaceous. Spores oval-elliptical, 8–9 by 5–6 microns; roughish. Odor slight, not of radish. Taste mild.

On deep sphagnum in swamp of balsam trees. The species belongs to the subgenus Dermocybe. It is related to C. raphanoides Fr. but differs in habitat, more slender habit, and lacks the odor and taste of that species. The colors become rather darker as the plant loses moisture.

Cortinarius cinnamomeus *Fr.* In swamps of cedar, balsam etc. on mosses. A number of its varieties also occurred.

Cortinarius claricolor *Fr.* Among fallen needles of spruce and pine. The color of the pileus is raw-sienna to orange-buff (Ridg.). The stem is while silky-fibrillose at first but not at all ringed as in C. triumphans *Fr.*

Cortinarius cylindripes *Kauff.* In balsam swamp.

Cortinarius deceptivus *Kauff.* Among debris in conifer woods. The violet to lavender color of the young plant is much deeper than in C. anomalus and fades rapidly.

Cortinarius decipiens *Fr.* Among mosses and sphagnum in balsam and tamarack swamp. A slender plant whose pileus possesses a prominent blackish umbo. The gills soon become Mars-yellow (Ridg.). A variety *minor* occurs.

Cortinarius erugatus *Fr.* Under conifers.

Cortinarius erythrinus *Fr.* Under balsam trees on bare soil. Smaller than C. decipiens, with violaceous hues at the apex of the slender stem.

Cortinarius evernius *Fr.* In tamarack and spruce swamp. The stems are often deeply embedded in mosses and may become 15–20 cm long; when fresh they are colored a brilliant lavender-violet, especially toward the base.

Cortinarius flexipes *Fr. minor.* In mosses under spruce trees. One of the prettiest. The pileus is densely covered by grayish white, subagglutinate, fibrillose scales up to the acute umbo.

Cortinarius glabellus *Kauff.* On the ground in mixed woods.

Cortinarius glandicolor *Fr.* On the ground in conifer forests after heavy rains. The dark colors of all parts are striking. Easily confused with the stouter forms of C. uraceus Fr. It becomes blackish in age or when dried.

Cortinarius gracilis *Pk.* In sphagnum and other mosses under balsam, tamarack and spruce trees. Much larger than the type. The strict, subcylindrical stems are much elongated, 8–15 cm long. Spores 10–11 by 5–6 microns.

Cortinarius hemitrichus *Fr.* Attached to mosses and much decayed wood.

Cortinarius herpeticus *Fr.* Mossy ground, cedar and balsam swamp.

Cortinarius iliopodius *Fr.* On sphagnum in a swamp of tamarack and spruce. In habit like C. decipiens, that is, slender-stemmed and with a conic-campanulate pileus. In color it approaches C. paleaceus Fr. Spores 10–12 by 5–6.5 microns.

Cortinarius iodes *B. & C.* Among mosses under balsam trees.

Cortinarius juberinus *Fr.* A variety with the apex of the stem violaceous. On deep moss and sphagnum. Spores 7–8 by 5.5–7 microns.

Cortinarius lutescens *Pk.* On low, moist ground, conifer woods. The olive color is more prominent than in the type.

Cortinarius lilacinus *Pk.* On mosses under balsam.

Cortinarius mucifluus *Fr.* In wet places near swamps. Usually referred to C. collinitus Fr. which is a very different plant approaching C. cylindripes Kauff.

Cortinarius malicorius *Fr.* On moss in spruce swamps. Habit of C. semisanguineus, but with dark green flesh.

Cortinarius paleaceus *Fr.* In mossy woods.

Cortinarius persicelis *Fr.* On the ground in a cedar swamp. The slender stem is persistently dark grayish lavender. (Ridg.) Spores 9–10 by 5–5.5 microns.

Cortinarius pholideus *Fr.* On decayed wood and debris in birch and spruce woods.

Cortinarius plumiger *Fr.* In mixed woods, on the ground. A very distinct species. The pileus is 5–12 cm broad, clothed with a dense tomentose-fibrillose covering. The stem, when fresh, is grayish blue-violet (Ridg.) within and without, but this color fades so quickly that it is usually absent. The stem is stout and very fibrillose, sometimes annulate.

Cortinarius pulcher *Pk.* Among mosses, tamarack swamp.

Cortinarius redactus *Britz.* On mosses in conifer swamp.

Cortinarius rigida *Fr.* Among mosses under spruce and pine.

Cortinarius sanguineus *Fr.* Deep in sphagnum, where the stems are often much elongated.

Cortinarius semisanguineus *Fr.* In swamps, on mosses.

Cortinarius subflexipes *Pk.* Under conifers, wet places. One of the smallest species.

Cortinarius sphoerosporus *Pk.* On mossy ground under conifers.

Cortinarius subpurpurascens *Fr.* Under conifers or bare ground.

Cortinarius triumphans *Fr.* Near the top of a hillside covered with birch and balsam. Probably not before noticed in this country. Its characters are those of the plants I found in Sweden.

Cortinarius uraceus *Fr.* On the ground under balsam and spruce. The plants are blackish after they are dried.

Cortinarius vibratilis *Fr.* On the ground in mixed woods. C. amarus Pk. is identical.

Cortinarius violaceus *Fr.* On mossy ground, often deeply embedded by the large bulbous stems in thick mosses. Frequent and copious.

MELANOSPORAE

Psalliota abruptibulbus *Pk.* In mixed woods.

Stropharia depilata *Fr.* In mixed woods of birch, beech and spruce.

Stropharia stercoria *Fr.* On dung hills in fields.

Stropharia umbonatescens *Pk.* On dung hills in woods.

Hypholoma sublateritium *Fr.* Around stumps in woods.

Coprinus tomentosus *Fr.* Among debris in woods.

GASTEROMYCETES

Geaster saccatus *Fr.* In mixed woods of birch, beech, spruce etc. On the ground among debris.

Bovista plumbea *Pers.* On the ground in pastures.

Bovista pila *B. & C.* In fields.

Bovistella pedicellata (*Pk.*) *Lloyd.* On the ground under balsam.

Lycoperdon atropurpureum *Vitt.* Under spruce.

Lycoperdon glabellum *Pk.* On the ground in spruce and balsam woods.

Lycoperdon pyriforme *Scheff.* On wood, logs, stumps etc.

Lycoperdon gemmatum *Batsch.* On the ground and humus, in balsam forests.

Scleroderma vulgare *Fr.* In open conifer woods, on the ground.

Sphaerobolus carpobolus *L.* On much decayed wood and debris.

Crucibulum vulgare *Tul.* On rotting paper, roadside.

Cyathus stercoreus (*Schr.*) *De Toni.* On old dung hills in fields.

June 1915
Cryptogamic Herbarium
University of Michigan

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New York State Museum

JOHN M. CLARKE, Director

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5	.25	13	*Out of print*	23 (" 124)	.75
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7	.20	15 (" 31)	.15	25 (" 141)	.35
8	.25	16 (" 36)	.25	26 (" 147)	.35
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The divisions to which bulletins belong are as follows:

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3 Economic Geology
4 Mineralogy
5 Entomology
6 "
7 Economic Geology
8 Botany
9 Zoology
10 Economic Geology
11 "
12 "
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18 Archeology
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—— & Clarke, John M. v. 8 pt 1 Introduction to the Study of the Genera of the Paleozoic Brachiopoda. 16 + 367p. 44pl. 1892. $2.50.

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Catalogue of the Cabinet of Natural History of the State of New York and of the Historical and Antiquarian Collection annexed thereto. 242p. 8vo. 1853. *Out of print.*

Handbooks 1893–date.

New York State Museum. 52p. il. 1902. Free.

Outlines, history and work of the museum with list of staff 1902.

Paleontology. 12p. 1899. *Out of print.*

Brief outline of State Museum work in paleontology under heads: Definition; Relation to biology; Relation to stratigraphy; History of paleontology in New York.

Guide to Excursions in the Fossiliferous Rocks of New York. 124p. 1899. *Free.*

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Insecticides and Fungicides. 20p. 1909. Free.

Classification of New York Series of Geologic Formations. 32p. 1903. *Out of print.* Revised edition. 96p. 1912. Free.

Geologic maps. Merrill, F. J. H. Economic and Geologic Map of the State of New York; issued as part of Museum Bulletin 15 and 48th Museum Report, v. 1. 59 x 67 cm. 1894. Scale 14 miles to 1 inch. 15c.

—— Map of the State of New York Showing the Location of Quarries of Stone Used for Building and Road Metal. 1897. *Out of print.*

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*Theresa quadrangle. 1910. Free.
*Poughkeepsie quadrangle. 1911. Free.
*Honeoye-Wayland quadrangle. 1911. 20c.
*Broadalbin quadrangle. 1911. Free.
*Schenectady quadrangle. 1911. Free.
*Saratoga-Schuylerville quadrangles. 1914. 20c.
*North Creek quadrangle. 1914. Free.
*Syracuse quadrangle. 1914. Free.
*Attica-Depew quadrangles. 1914. 20c.